



Maternity Care and Services in Rural Tasmania: The Perspectives of Rural Women and Health Professionals

by

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Doctor of Philosophy

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Paper 1: Hoang, H., Le, Q., & McManamey, R. (2011). Social impacts of Closure of Maternity Services in Rural Areas. In Q. Le (Ed.), *Health and Wellbeing: A social and Cultural Perspective* (pp. 69-78). New York: NOVA Science Publishers.

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Abstract

Despite strong records of safety and quality maternity care, maternity care in Australia is not meeting the needs of rural and remote women as evidenced by poor access and outcomes. Rural communities have experienced substantial and on-going loss of maternity services for more than a decade. Consequently, rural women have to leave their community and support networks to go to distant centres to give birth. The loss of these critical health services has adversely affected rural women, families and communities. Workforce shortages, safety and quality considerations and cost considerations are the three interrelated reasons which have led to the loss of small rural birthing services in Australia. To improve maternity services in rural communities, it is important that women's needs for the services are identified and catered for as much as possible.

This study aims to: (i) identify the needs of women in maternity care in rural areas, (ii) examine the current available maternity health services in rural Tasmania and (iii) identify the gaps between the needs and services. A conceptual frame work based on a literature review was constructed to guide the study. The study employed a mixed methods design with a self-administered mailed survey and semi-structured interviews as data collection methods. Six rural communities which are representative of all rural Tasmania were chosen to conduct the study. Through the health care and child health centres in these communities, 600 survey questionnaires were sent out to women. The survey response rate was 35%. Semi-structured interviews were conducted with 22 women and 20 health professionals. Descriptive statistics and Chi Square tests were used to analyse the survey data with the use of SPSS 15. The interview data were analysed using grounded theory and thematic analysis with the use of NVivo v8.0.

The findings indicate a set of unmet maternity needs of women in rural Tasmania namely (i) access needs, (ii) safety needs, (iii) needs for small rural birthing services, (iv) information and support needs, and (v) needs for quality services. The study

suggests that the lack of maternity services in the Tasmanian rural areas transfer risk from the health care system to rural families because of privileging of medical model over a feminist theorising or primary care approach. The study provides important recommendations for bridging the gaps between the women's needs and currently available maternity services. Firstly, antenatal, postnatal and support services should be provided in the local communities through outreach or visiting services. Secondly, rural hospitals without maternity services should be properly equipped and prepared to deal with unexpected emergency childbirths to ensure the safety for women and babies. Appropriately equipped and skilled ambulance services should be in place for all rural hospitals. In addition, further withdrawal of rural birthing services should be challenged and consideration given to reopening closed rural services. Furthermore, women should be informed about all options and services available through the collaboration of health professionals in local areas and the regional hospital. Finally, child health services in rural communities should provide quality services for women throughout their pregnancy and postnatal period as part of continuity of care.

In summary, this study makes a contribution to the enhancement of maternity care and services in rural Tasmania and consequently to improve access and outcomes for rural women and their families.

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Chapter 1: Introduction

1.1 Introduction

This chapter presents an over-all picture of the study. It begins with a background outlining the research and contextual information which forms the foundation and rationale of this study. It describes the research objectives which spell out clearly the specific problems and issues which the study has identified. This is followed by an overview of the methodology as well as the ethical issues involved. Lastly, the thesis structure is illustrated in terms of composite chapters and contents.

1.2 Research background and rationale of the study

The purpose of this thesis, entitled “Maternity Care and Services in Rural Tasmania: the Perspectives of Rural Women and Health Professionals”, is to identify gaps between women’s needs in maternity care and the current health care system in rural Tasmania. The aim is to use the research to provide recommendations for the improvement of maternity services for rural women in terms of access and social wellbeing impacts.

The topic of rural maternity care services has been an interest of the researcher for a long time. Before embarking on this thesis, the researcher undertook a study investigating the cultural birthing practices of Asian migrant women in rural Tasmania and their difficulties in accessing health care (Hoang, Le, & Kilpatrick, 2009). Being a mother and an Asian migrant living in rural Tasmania herself, the researcher has experienced the cultural differences in maternity care and difficulties in accessing health care services in Australia. That research journey enabled the researcher to gain knowledge about the Tasmanian maternity care system and highlighted the issues that Asian migrant rural women face in accessing maternity services in rural Tasmania. During that research process, the researcher spoke to many other rural women in Tasmania and discovered that not only migrant

women encountered difficulties in accessing maternity care services, but that rural women in general experienced lack of maternity care choices and a lack of continuity of care. Rural women had to travel hundreds of kilometres not only to give birth but also for antenatal and postnatal care. They often mentioned how physically and psychologically stressful it was to be away from home for many days and in some cases for a few weeks before giving birth because they did not have the option of giving birth in a local hospital. Those women strongly expressed their wish to have maternity services available in their local community. These rural women's stories compelled the researcher to expand her research on rural maternity services to include the broader population in the hope that rural women's voices may be heard by local hospitals, health authorities, state government and other stakeholders. In this study, maternity care refers to care provided to mothers and babies during the pregnancy, labour and delivery and early postnatal period including breastfeeding support (up to the first year).

1.2.1 Theoretical background

Feminists suggest that while sex is biologically determined, gender identity is socially constructed through the societal expectations placed on men and women in a relational context (Wearing, 1996; Wharton, 2005). The way rural women and men live their lives is shaped by gender constructions and discourses (Alston, 1995; Leipins, 2000). Women are often the most frequent users of health services due to their biological roles such as pregnancy and their social or gendered roles such as caring which form their broader conceptualisation of health and wellbeing (Rogers-Clark, 1998). Furthermore, women are more likely to be responsible for the health of their family members such as children, but often ignore their own health status (Alston & Kent, 2004). Thus, gender is seen as a key determinant of health status (Smith, 2004). Feminist theorising allows a focus on women and their experiences and on the way health care and provision of health services is gendered (Alston, et al., 2006). The feminist perspectives on childbirth aim for expanded choices in childbirth and control over the human body. In these respects, the research contrasts to research underpinned by medical models which restrict women's

choices and reduces their empowerment in maternity care. Feminist theorising and the medical model will be further explained in the literature review chapter.

1.2.2 Contextual background

Before explaining the contextual background of the study, it is important to understand the definitions of remoteness and rurality used in this thesis and the Tasmania's geography and demographics as the setting of the study.

1.2.2.1 Rural and remote definitions

In Australia, there are several different classification systems which have been developed to define remoteness and rurality. This study will use the Rural, Remote and Metropolitan Areas (RRMA) classification developed in 1994 by the Department of Primary Industries and Energy.

There are seven categories in the RRMA classification including 2 metropolitan, 3 rural and 2 remote (AIHW, 2011). This is illustrated in Table 1-1.

Table 1-1: Structure of the Rural, Remote and Metropolitan Areas (RRMA) classification

Zone		Category
Metropolitan zone	M1	Capital cities
	M2	Other metropolitan centres (urban centre population > 100,000)
Rural zone	R1	Large rural centres (urban centre population 25,000-99,999)
	R2	Small rural centres (urban centre population 10,000-24,999)
	R3	Other rural areas (urban centre population < 10,000)
Remote zone	Rem1	Remote centres (urban centre population > 4,999)
	Rem2	Other remote areas (urban centre population < 5,000)

1.2.2.2 About Tasmania

Tasmania is an island state and isolated from mainland Australia as shown in *Figure 1-1*. Tasmania has the most regional and dispersed population of any state in Australia, with almost 60 per cent of the population living outside the capital city (Department of Premier and Cabinet, 2008). At 30 June 2011, it was estimated that resident population of Tasmania was approximately 510,600, an increase of 3,200 (0.6%) over the previous year (Australian Bureau of Statistics, 2012).



Figure 1-1: Australian Map (Google, 2012)

1.2.2.3 Tasmania: The 2012-2013 Budget

The 2012-13 Budget of Tasmania continues to address the current fiscal challenge with further development and implementation of the Government's Budget Response which was first outlined in the *2010-11 Mid-Year Financial Report* and in the 2011-12 Budget (Parliament of Tasmania, 2012). *Figure 1-2* illustrates the budgeted general government expenses across different sectors including health care in 2012-13.

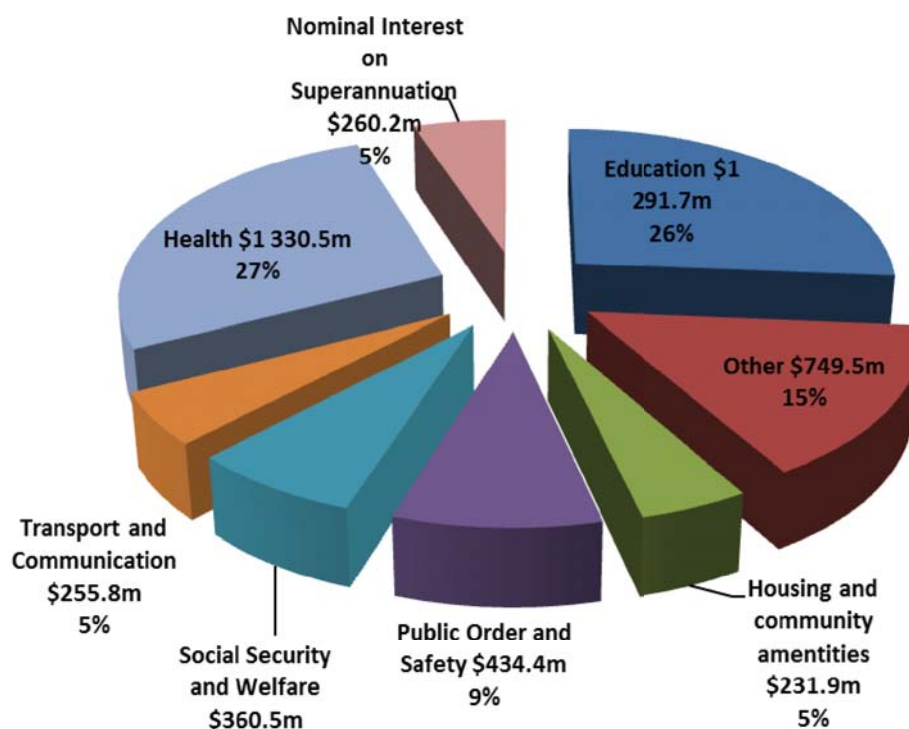


Figure 1-2: General Government Expenses by Purpose, 2012-13 (Parliament of Tasmania, 2012)

1.2.2.4 Contextual background

In Australia, about 32% of the population live in rural (29%) and remote (3%) areas (Australian Institute of Health and Welfare, 2008b). Rural Australia is as diverse geographically, economically and socially as urban Australia (Warner-Smith & Brown, 2003). Health inequalities between rural and urban areas are significant as rural Australians have poorer health and less access to services than urban Australians, and lower life expectancies and higher disability rates (Brown, 2002). In addition, rural residents in general are particularly disadvantaged because socio-economic measures such as education, employment and the quality of the physical and social environment determine health status (Ryan-Nicholls, 2004). In fact, the Australian Institute of Health and Welfare notes that health status decreases as distance from metropolitan areas increases (Australian Institute of Health and Welfare, 2008a). Rural women's health status is likely to differ depending on where they live and according to their environment, and their ability to access support, information and services (Stehlik, 2001).

Although it is obvious that rural Australia has poorer health and wellbeing, health services are clearly not meeting the need of its consumers (Smith, 2004). Rural health service provision faces many challenges including limited funds for services, a lack of access to specialist services and a lack of access to public transport where travel to services is the only alternative (Warner-Smith & Brown, 2003). Areas that are relatively inaccessible and have small populations tend to have limited services and a poor standard of facilities (Ryan-Nicholls, 2004). Further complex issues for rural health delivery derive from a lack of revenue from smaller populations, a lack of consensus on what is adequate health servicing, the application of urban strategies to rural health provision, and a lack of research on rural health (Worley, 2004).

In terms of maternity services, rural women encounter a number of health inequities. Particularly, rural and remote families experience higher rates of maternal deaths (Kildea, Polack, & Barclay, 2008); rural women have significantly higher rates of neonatal deaths and remote women have higher rates of foetal deaths (Australian Institute of Health and Welfare (AIHW), 2005). Many of these health inequities result from difficulties in accessing health care services (Department of Health and Ageing, 2009). The Department of Health and Ageing has recently conducted “the maternity services review” (the Review) to address a range of issues including health inequalities of people living in rural and remote areas and acknowledged that:

While our system delivers to most Australian women, access to quality maternity services and positive outcomes from pregnancy, this is not uniform, as some parts of Australia and some population groups experience poorer access and outcomes. As with health care services more broadly, the difficulties faced by many Australians in accessing necessary services in rural areas has been highlighted to the Review Team. Similarly, the poorer access and outcomes for Indigenous mothers and babies were identified by many as the most pressing national issue. (Department of Health and Ageing, 2008, p. 22)

Accessing appropriate maternity services is one of the particular concerning issues in rural and remote areas in Australia where over 50% of small rural maternity units have closed since 1995 (2006). Thousands of rural and remote women are forced to leave their community to visit distant centres to give birth. The Rural Doctors Association of Australia (2009) expressed the view that the situation in rural areas has shown no sign of improving.

In this context of current rural areas, there is an urgent need to improve access to maternity services and outcomes for rural women. The Review admits that maternity services are not meeting the needs of rural women as evidenced in the poor access and outcomes. It is critical to allow flexibility to respond to community needs and priorities and workforce availability, as opposed to the imposing of a “one size fits all” model of maternity care for all communities (Department of Health and Ageing, 2009). To improve maternity services in rural communities, it is very important that women’s needs for the services are identified and catered for as much as possible. There is to date no specific study investigating the maternity needs of rural communities including antenatal, birthing and postnatal care needs in Australia and comparing those needs with the existing maternity services and policy. Therefore, there is a gap for this study to contribute to the field.

This research seeks to contribute by providing useful insights to health workers, policy makers and community organisations about rural women’s needs in relation to maternity care. Furthermore, the outcomes of this research should inform the health system of the ways to bridge unmatched gaps between rural women’s needs in maternity care and current health services. It is hoped that by improving maternity services for rural women, those women, their families and their communities will enjoy the same high standard of health care as their city counterparts.

1.3 Research aim and objectives

The aim of the study is to identify gaps between rural women’s maternity care needs and current maternity services in Tasmania. It is expected that the study will

provide insightful information for policy makers and other stakeholders to improve maternity services for rural families in Tasmania in terms of access and social wellbeing impacts.

To achieve the aim of the study, the following research questions (RQs) have been formulated:

- RQ1: What are women's maternity care needs in rural Tasmania?
- RQ2: What are the current policy and rural maternity services in Tasmania?
- RQ3: What are the gaps between women's needs and the services provided?

The first RQ of the study is to investigate women's needs in maternity care in rural Tasmania. This will provide the health care system with insightful information about desires and views of its consumers in maternity services. The second RQ is to examine current maternity services and policies for rural women. The third question is to identify gaps between consumers' needs and services. Based on the findings of the study, recommendations will be made to fill those gaps with the aim of improving maternity services in rural Tasmania.

1.4 Overview of the methodology

This study is aligned with and informed by pragmatic knowledge claims (Creswell, 2003a). Under this orientation knowledge claims arise out of actions, situations, and consequences and research problems are the most important instead of methods. Thus, researchers use all approaches to understand the problem and to derive knowledge about it. In order to fully understand women's needs in maternity care in rural areas in Tasmania, this study adopted the pragmatic knowledge claims as its research paradigms. In terms of theoretical perspectives, feminist theory and grounded theory have informed the methodology of the study. This will be explored in detailed in section 3.3.

The study employed a mixed methods design which is a combination of quantitative and qualitative methods. A quantitative approach was used to gather statistical information through a survey questionnaire. A qualitative approach was applied to enrich the data gathered from the survey using semi-structured interviews. The

specific mixed methods design used in this study is the sequential triangulation mixed method design. Therefore, the survey was conducted first and the interviews followed.

The study was conducted in six rural communities which were selected to represent all rural communities in Tasmania in relation to the distance to the major hospital and the absence of maternity services. The selection of communities is further explained in chapter 3. Prior to the full implementation of the questionnaire, a pilot study was conducted with the assistance of four international experts in the field and pre-testing of the questionnaire was undertaken with 20 participants. The reliability of 15 scale questions in the questionnaire was tested using Cronbach's alpha. The final version of the survey was distributed to 600 women in the chosen communities. 210 questionnaires, which represent a 35% response rate, were returned. The study employed both descriptive statistics and inferential statistics to analyse the survey questionnaire data.

Interviews were conducted with two sample groups including women, from all six communities, who had given birth in rural areas and health professionals from across Tasmania who have had experience in providing maternity care for rural women. Detail of sampling is discussed in chapter 3. For the first sample group, the women were recruited through the survey administration. Among the 210 returned questionnaires, 48 women consented to participate in follow-up interviews. However, data saturation had been achieved by the 22nd interview. For the second sample group, health professionals were recruited through directors and managers of several health centres and hospitals in Tasmania. Twenty health professionals were sourced to participate in the study.

The validity and reliability of the qualitative data were addressed in this study. Firstly, the data collected from the interviews were analysed and coded based on the actual words of the participants. Secondly, the findings were checked using the member checking approach. Finally, an independent judge reviewed the raw data of the interviews and coded a random sample of six interviews to ensure the reliability

of the data. Qualitative data were analysed through grounded theory analysis and thematic analysis with the assistance of NVivo 8 software.

1.5 Structure of this thesis

The study is divided into eight chapters. The following section provides an overview of all the chapters.

- Chapter 1 – Introduction: covers the aim and objectives of the study and provides background information of the study as well as its structure.
- Chapter 2 – Literature Review: critically reviews literature relevant to the issues examined. It discusses the impacts of the closure of rural maternity units on rural communities; the reasons behind the decision to close rural birthing services and a review of health policy.
- Chapter 3 – Research Methodology: describes the conceptual frame work and the research design of the study. It discusses the research methods, research approach, data collection and data analysis. Reliability and validity issues are also highlighted in this chapter.
- Chapter 4 – Quantitative Data Analysis: reports the results of the questionnaire data analysis.
- Chapter 5 – Qualitative Data Analysis: presents the results obtained from the interviews with 22 rural mothers and 20 health professionals.
- Chapter 6 – Discussion of Qualitative and Quantitative Results: presents the integration of the results from both quantitative and qualitative analyses. This chapter provides significant findings by interpreting and combining the data analysis results.
- Chapter 7 – Conclusion: presents the final remarks such as the achievements, significance of the study and the researcher's reflections in undertaking the research.

1.6 Conclusion

This chapter has presented an overview of the thesis. The chapter started with the statement of purpose of the study which is to examine the gaps between needs of

rural women in maternity care and the current maternity services with the aim of improving access and social wellbeing impacts for rural women. The reasons why the researcher chose the research study have been given.

Secondly, this chapter has introduced the theoretical and conceptual background of the research. An approach drawing on a feminist perspective was adopted in this study as it enables a focus on women and their experiences. In the Australian context, existing evidence is that maternity care is not meeting the needs of all Australian women especially in rural and remote areas because rural women have poorer access and outcomes than their city counterparts.

Thirdly, the research aim and objectives have been presented, followed by the overview of the methodology. The study employed a mixed methods design which combined qualitative and quantitative methods to gather data from rural women who had given birth and health professionals. Survey questionnaires and semi-structured interviews were implemented as the data collection tools. The study was carried out in six different rural sites across Tasmania. Finally, this chapter presents the structure of the thesis with an overview of each chapter. The next chapter will review the literature.

Chapter 2: Literature Review

2.1. Introduction

Maternity services in rural areas [in Australia] have been under increasing pressure over the past decade with at least 50% of rural maternity units having been closed down in the past decade alone... Pregnant rural women are increasingly having to travel great distances to give birth as more and more rural maternity units have been closed by the state governments. (Rural Doctors Association of Australia, 2009, p. para 2)

The above quote describes the current situation in rural areas in Australia. The downgrading and cessation of maternity services in rural settings across Australia continues to take place. How important is the maternity service for rural communities and how does the closure affect rural women and communities? What are the reasons to stop providing rural birthing services? What are the relevant policies especially rural health policies? The chapter will review the literature relevant to the themes and aim of this study. Before exploring these issues in detail, it is important to understand the concept of community, place and sense of place as they provide a conceptual point of reference for discussion of issues about maternity services and birth giving in a rural context.

2.2. Community, place and sense of place

Community can be defined as many groups of people with common interests or needs who relate to one another in some way. It can cover a group of people living in close proximity, sharing a common cultural or racial background, or possibly a group with common interests, values or aspiration (Sydney West Area Health Service, 2005). As such, a community can be seen as a community of place or a community of interest. A community of place refers to people living in the same

location and their relations with one another. A community of place has at least two aspects. Firstly, there is a commonly agreed geographic boundary. People in the same community can identify those areas that make up the community. Secondly, people living in the same area interact socially in a certain pattern. A community of interest is not necessarily bounded geographically and people may belong to more than one community. Almost always, community of interest and community of place coexist in multiple layers.

A place is not just a geographic boundary but is seen as more than the sum of its material characteristics: it was the centre of meanings, intentions and felt values, the focus of emotional attachment and the site of felt significance (Pred, 1983). Humanistic geographers have been studying the ways in which people attach meaning to a place. The main contribution of humanistic geography is not its attempt to construct a rigorous phenomenological geography but rather the sensitising of researchers to everyday attachments people forms with place (Cloke, Philo, & Sadler, 1991). The same observation might be made of health geography; however researchers have paid little attention to the understanding of places within medical geography as an experienced zone of meaning and familiarity (Kearns, 1993).

Kearns and Joseph (1993) sought to locate sense of place studies within a much broader understanding of the intersection between people, places and social processes. Mohan (1998) contends that the significance of this research is that it focuses on the complex interplay between place, health and social process. Sense of place is mobilised as a way of exploring the emotional attachments between people, place and sites of health care. This interrelationship is described through reference to the positioning of health care services within the individual and collective imagination of the communities under study. Thus, “commonplace” elements within the built environment, such as hospitals and schools, are seen to hold important symbolic properties (Kearns & Joseph, 1997). Furthermore, the symbolic value attached to such buildings is seen to impact upon the sense of belonging and wellbeing that individuals feel (Kearns, 1998). The National Rural Women’s Coalition in Australia noted that:

The concepts of place and community are extremely important in rural women's health self-assessments. Consistently rural women place importance on social and environmental conditions in their health self-assessments and the rural context is an important factor in satisfaction, dissatisfaction and wellbeing. (National Rural Women's Coalition, 2005, p. 3)

Returning to the current issue of the closing of maternity services in rural areas, the section below presents a review of the relevant government policies related to the scope of the study and explores its impacts on the community in the context of place and community that have been discussed.

2.3. Policies

This section consists of four themes, namely equitable access, national rural health policies, the Tasmanian health system and maternity care system in Tasmania.

2.3.1. Equitable access

The concept of equity in health service access is deeply rooted in Medicare which is one of the largest and most expensive of all Australian health initiatives and underpins the whole health system:

Medicare is Australia's universal health care system introduced in 1984 to provide eligible Australian residents with affordable, accessible and high-quality health care. Medicare was established based on the understanding that all Australians should contribute to the cost of health care according to their ability to pay. It is financed through progressive income tax and an income-related Medicare levy. (Department of Health, 2007a)

Under Medicare, all Australians are provided with free public hospital care as well as free or subsidised health care services and medications. In order to provide free hospital care to all Australians, the Commonwealth works cooperatively with the states. The Australian Health Care Agreement between the Commonwealth of

Australia and the State of Tasmania 2003-2008 (Commonwealth of Australia, 2003) clearly stated that the primary objective of the Agreement was to secure access for all Tasmanians based on the principles of equity and universalism:

The primary objective of this Agreement is to secure access for the community to public hospital services based on the following principles: (a) Eligible persons are to be given the choice to receive, free of charge as public patients, health and emergency services of a kind or kinds that are currently, or were historically, provided by hospitals; (b) Access to such services by public patients free of charge is to be on the basis of clinical need and within a clinically appropriate period; and (c) arrangements are to be in place to ensure equitable access to such services for all eligible persons, regardless of their geographic location. (Commonwealth of Australia, 2003, p. 4)

In achieving the other objective of Medicare which is to provide free health services to all citizens, the Government provides a rebate for eligible services, known as the Medicare Benefits Schedule. The doctors can bill Medicare directly accepting the Medicare benefits as full payment of a service. This practice is called “bulk billing” and the service is free of charge to the patient. However, a medical practitioner may charge more than the Schedule Fee (or Medicare rebate) and a gap fee will be borne by the patient. Despite the existence of universal health care system as stated above, the literature suggests that the principles of Medicare have not achieved their potential in rural and remote settings. Local health services tend to be more expensive in rural than urban areas and GP consultations are less likely to be bulk-billed (National Rural Women's Coalition, 2005). Indeed, a study by Alston and colleagues (2006) indicated that 60% of rural women find it difficult to access bulk billing in their area. In addition, Kenny and Duckett (2004) found ignorance of the agreement between Victoria and the Commonwealth which states that all public hospital treatment is free. In their study, the general practitioners privately billed clients who presented at the emergency department in the rural hospitals. The authors explained why rural doctors were free to charge their patients while

working in public hospitals which have an agreement with the Commonwealth to provide free hospital service for all Australians.

The power exerted by rural doctors in this study suggested that any attempts by rural hospitals to cease private billing would result in the withdrawal of medical services. With rural Victoria already facing considerable difficulties in attracting doctors, it could be suggested that any restrictions on potential earning capacity could create a situation where the Victorian rural health care system would be faced with total breakdown. (Kenny & Duckett, 2004, p. 1067)

2.3.2. National rural health policies

The ideologies of equity and universalism have also diffused into the rural health policies developed at a national level. The aims of the National Rural Health Strategy (Australian Health Ministers' Conference, 1994) are consistent with the principles of equity stated in Medicare and reflect a desire to improve the health outcomes and available services for rural Australians.

The broad goals of this National Rural Health Strategy are to provide a framework and policy to guide the provision of appropriate rural health services and equitable access to them; provide a mechanism for addressing agreed rural health priorities; encourage the adoption of approaches to service delivery which are tailored to meet the special circumstances of rural Australia. (Australian Health Ministers' Conference, 1994, p. 1)

The 1996 update of the National Rural Health Strategy (Australian Health Ministers' Conference, 1996) strongly emphasised the equity and social justice concerns.

This proposal has focused attention nationally on how best to provide services to rural communities based on principles of equity and social justice. (Australian Health Ministers' Conference, 1996, p. 4)

In addition, the report of the Maternity Services Review considers access to maternity services in rural areas as a national priority and recommended that “given the role of the states and territories in the provision of maternity services in rural areas, the availability of rural maternity services is a priority area for the Plan, requiring the engagement of states and territories” (Department of Health and Ageing, 2009, p. 26). As a result of the Maternity Services Review, the Maternity Services Reform (Department of Health and Ageing, 2010) announced that the health system will provide more services for rural and remote communities through an expansion of the successful Medical Specialist Outreach Assistance Program and extra training support for doctors and midwives, particularly in rural and remote Australia. According to the maternity services reform, health professionals as members of multidisciplinary service teams including obstetricians, registered midwives, maternal and child health nurses, and allied will be eligible to access assistance to deliver outreach maternity services.

2.3.3. Tasmanian health system

At state level, the Tasmania government is obliged by the National Healthcare Agreement with the Commonwealth government (Council of Australian Government, 2009) to provide all Tasmanians with “timely access to quality health services based on their needs, not ability to pay, regardless of where they live in the country”. This National Healthcare Agreement also states that one of the long-term objectives of the Commonwealth, state and territory governments is to have a sustainable health system. Similarly, the Tasmanian Health Plan (the Plan) (Department of Health and Human Services, 2007) reaffirms the commitment to achieving sustainable regions.

The recommendations of the Plan are based on explicit principles for sustainable service design. If services can be provided safely, effectively and efficiently, the Plan proposes that they should be delivered locally. Where centralisation of services is necessary because of quality, cost or sustainability considerations, access should be facilitated through patient and carer support and service

accountability arrangements. (Department of Health and Human Services, 2007, p. 6)

The Plan also identifies issues facing the health workforce in Tasmania including the challenges of attracting and retaining skilled health professionals and an ageing health professional workforce. In dealing with these issues, the Tasmanian Government has produced the Health Recruitment Plus Strategic Plan 2010-2013 (Health Recruitment Plus Tasmania, 2010) with a goal to provide enough high quality health professionals for a healthy Tasmania. In particular, the Health Recruitment Plus Strategic Plan recommends detailed strategies in order to:

- support the recruitment of a competent health workforce of an adequate size;
- support the retention of an adequate health workforce; and
- build the business capacity of practices, with emphasis on the capacity to recruit and retain staff.

2.3.4. Maternity care system in Tasmania

Tasmania has three major public hospitals which provide maternity services for Tasmanian women, namely Royal Hobart Hospital, Launceston General Hospital and North West Regional Hospital with a supporting network of rural hospitals and multipurpose services. The Royal Hobart Hospital is the Tasmania's largest hospital which provides general and specialty medical and surgical services including neonatal intensive care and high risk obstetrics (Department of Health and Human Services, n.d.-c). The Launceston General Hospital has a maternity unit which provides maternity services including neonatal intensive care and high risk obstetrics. (Department of Health and Human Services, n.d.-a). The North West Regional Hospital at Burnie is a secondary level service hospital and provides maternity services (without neonatal intensive care) to North West Tasmania and King Island (Department of Health and Human Services, n.d.-b). There are also four private hospitals (Hobart Private Hospital, Cavalry Health Care Tasmania, North West Private Hospital and St Helens Private Hospital) which provide maternity services in Tasmania and are located in Hobart and Burnie.

Most rural hospitals and multipurpose centres across rural Tasmania are staffed by general practitioners (GPs), nurses and other health professionals (Department of Rural Health, 2011) and do not provide maternity services. Many rural hospitals in Tasmania used to provide antenatal and postnatal care for rural communities. These services have been ceased over the last two decades in many rural Tasmanian communities in line with the decrease of maternity services everywhere in rural Australia. Only one rural hospital in Tasmania now provides maternity services including birthing care for low risk women. High risk women in this community are required to travel to the nearest major hospital to receive maternity care.

The child health service is a free service available to all families with children from birth to school age. The service is run by child health nurses who have the knowledge and experience to deal with child and family health issues and associated problems. Child health nurses provide mothers with information, guidance and support on issues including breastfeeding, child health and development, infant and child nutrition, maternity health, and parenting skills.

Under Medicare, all Australians are provided with free public hospital care as well as free or subsidised health care services and medications (Department of Health, 2007a). Depending on where women live and their risk status, women may be able to choose from a range of services as described in the section below.

2.3.4.1. Public hospital care

Pregnant women, who do not have private health insurance, obtain a referral from their general practitioner to a public hospital. Depending on a woman's health and the hospital she will be advised by the hospital midwives of several different options. Maternity care at the public hospital is free for all women who have Medicare cards. Doctors and midwives provide the care to women with normal and complicated pregnancies (Department of Health and Ageing, 2009).

Many major public hospitals have midwives' clinics which run by a midwife or group of midwives. These clinics are sometimes run in the community and are called 'outreach clinics'. Midwives are skilled professionals who provide complete

care for women with normal pregnancy and childbirth. If any complications arise then women are referred to a doctor at the hospital. Women then give birth in the hospital delivery ward and are attended by the hospital midwives and doctors on duty at the time. After the birth midwives on the postnatal ward provide care for them. Another care option in the public hospital is Team Midwifery/Midwifery Group Practice which involves small groups of midwives who work together to provide antenatal, labour, birth, and postnatal care to women (Department of Health and Ageing, 2009) .

2.3.4.2. General practitioner shared care programs

Most hospitals now offer women the option of having their pregnancy care shared between a GP and a hospital (Department of Health and Ageing, 2009). There are formal arrangements between a public hospital and local practitioner (GP, obstetrician, midwife). The majority of pregnancy care is provided by a local practitioner, with visits to the hospital at the beginning and latter part of pregnancy. GPs participating in shared care programs must meet certain criteria before being able to provide antenatal care. Hospital midwives and doctors mostly attend the birth and give postnatal care. If GPs do not bulk bill women will have to pay for the gap.

2.3.4.3. Early discharge programs

Due to the fact that women are staying in hospital for shorter periods of time than before, many hospitals have 'early discharge programs'. Women who choose to go home in the first 48 hours after a normal birth or within 72 hours after a caesarean are eligible to have a midwife visit them in their home for up to a week following the birth (Health Direct Australia, 2010). This program suits women who are well and feel they will be more comfortable and rested at home.

2.3.4.4. Private hospital care

Women who have the appropriate private health insurance can choose a private obstetrician to provide their antenatal care and attend birth in a private hospital. They can also have a private obstetrician attend their birth in a public hospital they

have visiting rights to (Department of Health and Ageing, 2009). Obstetricians are doctors specialising in pregnancy and childbirth. Costs for private care may not be completely covered by a health fund and women may have to pay part of the fee.

2.3.4.5. Birth centre care

Depending on where women live and whether they have any health or pregnancy complications women may be able to choose to have their care through a birth centre. Women's GPs can refer them directly, or the midwives in the hospital will give women this option when they book in for care. Birth Centres provide a home like environment where midwives provide care for women through pregnancy as well as assist them to give birth as actively and naturally as possible. Birth Centres are mostly located in hospitals and are staffed and run by midwives with medical back-up should complications occur (NSW Department of Health, 2003). There are two birth centres in Tasmania and located in Launceston and Hobart. The birth centre in Hobart is attached to and staffed by the hospital. The one in Launceston is a privately run and stand-alone birth centre.

2.3.4.6. Home birth care

There is a small number of Australian women who choose to give birth in their own homes (NSW Department of Health, 2003). These women are generally cared for by independent midwives, who work for themselves rather than a hospital. This means a cost is associated with this service. Some private health funds give rebates for midwifery services. The same midwife or small group of midwives provides pregnancy, birth and postnatal care. If women choose this option and complications occur during the pregnancy or birth women will need to give birth in hospital. Most midwives will accompany and support women when this occurs and those that have visiting rights to a hospital will continue to care for their patients along with the hospital doctors and midwives (Department of Health and Ageing, 2009).

2.4. Dilemmas in rural communities

The section below will discuss the reasons behind the decision to close maternity services in rural areas.

2.4.1. Workforce shortage

Shortage of health care professionals has been linked with the loss of maternity services in rural communities across Australia (NASOG, 2008), Canada (Goodwin, 1999), United Kingdom (Department of Health, 2003) and the United States (Institute of Medicine, 1989). In Australia, the maternity workforce as well as health care workforce is faced with an existing and worsening shortage. Rural and remote Australia has experienced a medical workforce shortage for a considerable period, particularly in terms of general practice services and some specialist services, such as obstetrics and gynaecology (Department of Health and Ageing, 2009). In addition, the ageing of the maternity workforce worsens the shortage as the proportion of health professionals approaching retirement age is increasing. Therefore, there have been increasing difficulties in attracting and retaining a rural workforce (NASOG, 2008). This is the major factor that has led to the closure of 130 or over 50% of rural maternity units in rural areas across Australia since 1995 (Rural Doctors Association of Australia, 2006).

2.4.2. Safety and quality considerations

Another contributing factor to the disappearance of maternity care in rural communities is safety and quality considerations (Rural Doctors Association of Australia, 2006). The difficulty of recruiting and retaining health providers who are willing to provide obstetric care in rural areas undermines the capabilities in providing anaesthetic and caesarean section services. The absence of these capabilities in rural communities raises concerns regarding the safety and quality of birthing services (NASOG, 2008). Some large population-based studies have found increased poor health outcomes for mothers and babies as the size of delivery units decreased (Heller et al., 2002; Moster, Lie, & Markestad, 1999). For instance, a study on the population of 1.25 million births in Norway by Moster and colleagues (1999) has found that the neonatal death rate was lowest for maternity units with the largest number of annual births. This rate steadily increased with decreasing size of the maternity unit. Their study suggested that the risk of neonatal deaths in low risk births would be reduced in large volume deliveries unit but would increase

in lower volume deliveries unit. Similarly, a German study (Heller, et al., 2002) indicated that early-neonatal death in low-risk births in very small delivery units was substantially increased when compared with low-risk births in large delivery units. Moreover, Heller et al. (2002) found that small and intermediate delivery units had a significantly increased early-neonatal death rate compared to large delivery units. These researchers raised serious concerns about the safety of small maternity units and called for reconsideration of further consolidation of birthing units in order to reduce early neonatal death rates.

Our results raise serious concern with regard to early-neonatal death and to neonatal death, not only in high-risk births inadvertently delivered in these smaller centres, but even among low-risk births deliberately planned for delivery in small birthing units. As a matter of health policy, there should be serious consideration of whether such a preference is justified in the face of the observed mortality gradient (Heller, et al., 2002, p. 1066).

However, in contrast to the above studies, there has been a considerable body of evidence in Australian and international literature supporting that for normal, low-risk women and their babies born in small rural units, health outcomes are at least equal to or more favourable than low-risk women using larger, fully serviced units. For instance, Cameron and Cameron (2001) found no increase in perinatal deaths over the decade 1991-2000 from a small rural hospital serviced by a group of non-specialist doctors in Queensland, Australia compared with the previous decade when specialist staff were available. Another Australian population-based study by Tracy and others (2006) has revealed that neonatal death and intervention at birth was less likely in smaller hospitals regardless of parity. Their study has given valuable evidence for the claim that in Australia, lower hospital volume is not associated with adverse outcomes for low risk women and challenged the view that giving birth in small rural maternity units is not safe (Tracy, et al., 2006).

In the long standing controversy of whether it is counterproductive to concentrate all maternity care in large units in major cities, this study

demonstrates that for normal weight babies and women with no identified risk markers in pregnancy, small hospitals provide a safe and protective environment for birth. (Tracy, et al., 2006, p. 94)

In addition, a study from New Zealand (Rosenblatt, Reinken, & Shoemack, 1985) found no evidence that a satisfactory outcome depends on a minimum number of deliveries. Importantly, an American study (Nesbitt, Larson, Rosenblatt, & Hart, 1997a) demonstrated that the outcomes of infants born to women from communities even with the poorest local access were more favourable than those born to women who delivered out of their local communities at larger maternity units. Similarly, a Canadian study by Van Wagner and colleagues (2007) showed improved outcomes when providing a midwifery-led collaborative model of care in remote communities.

There is also research suggesting that smaller maternity units without caesarean delivery capability deliver similar or favourable outcomes compared to nationwide outcomes. In particular, Leeman and Leeman (2002) found that the perinatal mortality rate in a rural hospital without caesarean capability was similar to the nationwide rate despite that the population there has certain high risk obstetric factors. Their study revealed no instances of major neonatal or maternal morbidity caused by the lack of surgical facilities. Given there were no caesarean facilities, the caesarean delivery rate was significantly lower than the nationwide rate. The authors (Leeman & Leeman, 2002) suggested that it is safe for women to give birth in small maternity units without operative capability provided that appropriate screening criteria and good transfer system are in place.

Our outcomes demonstrate that with the use of appropriate screening criteria, childbirth can safely occur in institutions that lack surgical suites. Caesarean rates were approximately one third of the nationwide rate even though Zuni-Ramah patients had a higher prevalence of such risk factors as diabetes and preeclampsia. (Leeman & Leeman, 2002)

In summary, despite concerns on the safety of small rural maternity units, there has been emerging and on-going evidence in the literature supporting the safety of small rural maternity units.

2.4.3. Cost considerations

The last factor that affects the closure decision is cost considerations (Klein, Christilaw, & Johnston, 2002a; Rural Doctors Association of Australia, 2006). From an economic point of view, it is not efficient to run maternity services where demand for the services or the number of patients using the services is too low. The cost of running rural maternity units, including salaries for health care professionals, maintaining and upgrading equipment and other expenses, may be too large given the small number of deliveries in rural communities. Therefore, hospitals, health authorities and health departments may anticipate savings through closing rural maternity units. However, Rural Doctors Association of Australia argues that this is not cost-effective for a number of reasons.

Firstly, delivery costs are usually lower in smaller hospitals. Secondly, closure shifts costs from the health budget to rural families and communities in the form of transport, accommodation, loss of income due to absence from a farm or other employment and spending diverted from local businesses. Thirdly, closure affects the sustainability of rural communities as discussed earlier. Fourthly, the larger hospitals where mothers have to go to give birth incur higher costs because of increased admissions, often without a commensurate increase in human or financial resources. Finally, ambulance services face higher costs, workload and responsibility issues frequently without increased funds, staff or training needed to cover them (Rural Doctors Association of Australia, 2006). As Klein et al. (2002a, p. 120) emphasise, “cost savings may prove elusive because the decision to close hospitals in smaller communities carries with it health and economic risks”.

2.5. Impacts on rural communities

2.5.1. Lack of access and travel related issues

Lack of access to maternity care services has been frequently documented in Australian literature. Alston and colleagues (2006) in their article raised the concerns on the issues of access of rural women across Australia. Essentially, the authors adopted a feminist perspective which centralised the concerns of women and enabled a focus on the way health care and provision of health services is gendered. Their results from a survey of 820 women revealed that the available rural services are mainly focused on primary health care and not on the services needed to ensure the health and wellbeing of women. In particular, their study indicated that critical services for women including maternity services are clearly lacking. Importantly, women in Alston and colleagues' study raised many issues associated with travel away from their communities to access health services including the costs of travel, the need to find accommodation and accommodation cost, the need to take leave and loss of work time, child care cost, being away from home, the time factor involved and tiredness. Due to the survey administration method, their study had a bias towards married and working women over 40 years old, literate and with internet access. Their study clearly suggested that the issue of health service access is apparent and problematic for women in rural areas. These researchers (2006, p. 9) came to a conclusion that:

This study revealed that a focus on primary health care servicing to rural areas may be overshadowing the needs of women for a variety of additional services. The lack of safe, affordable and adequate services in a variety of areas continues to put women's health, and that of their families, at risk in rural areas. This study revealed the need for a wider conceptualisation of health care in rural areas and the need to consider the health concerns of rural women.

In another qualitative Australian study, Roach and Downes (2007) contribute to the literature an important insight, despite the study being limited to a small number (n=28) of participants, about the perceptions and birthing experiences of women

who live in some of the most remote and isolated islands in Australia - Christmas Island and the Cocos (Keeling) Islands. Since on-island birthing ceased in 1998, all pregnant women have been required to leave the islands by 36 weeks gestation and travel to the mainland for birthing. In spite of having a birthing suite and an operating theatre, the hospitals on the islands only provide antenatal and post-partum care but not care for planned births due to a lack of suitably-qualified staff. The study of Roach and Downes (2007) revealed many challenges which women and families encounter due to having to leave the islands and being away for a long time (at least 5 weeks) including the considerable financial, logistical, social, cultural and spiritual difficulties. Expectedly, their study has found that a fall in the annual number of deliveries to the island women coincided with the cessation of on-island birthing. This may reflect a deliberate reduction in birth rate because of having to leave the Islands for confinement and having to face many stress-related issues:

Without change, many families of the IOT [The Indian Ocean Territories] will continue to be denied the opportunity of celebrating the birth of their children in the joyful way they should be able to expect. Instead, they are forced into a situation which is so stressful spiritually, culturally, financially and logistically that some say they are finding it preferable to simply forgo having further children. (Roach & Downes, 2007, p. 10)

Similar to the previous study by Alston and colleagues (2006), Roach and Downes (2007) emphasised that the current obstetric service in the IOT is not meeting the needs of the population. They have suggested that policy makers need to look beyond the guidelines when determining health service provision to very remote areas and take into account the critical financial, social and cultural costs that accompany such policies. These researchers have recommended three solutions to improve obstetric services for the IOT women. First, GP anaesthetists and GP obstetricians should be employed on the islands to provide a full obstetric service. Secondly, utilising a fly-in obstetric team will allow low-risk women to deliver on-island. Finally, there is an urgent need to provide greater support for women and families who have to leave the islands to deliver.

Another qualitative study by Dietsch and colleagues (2010) attempted to fill the gap in the literature by exploring the experience of women who are most affected by rural maternity unit closures in rural New South Wales (NSW), Australia. Their publication draws on the experience of 12 women who shared how they laboured en route to the centralised maternity unit. Their study has clearly shown that the closure of maternity units in rural areas has put women and their unborn babies at risk. All women who have to travel to a centralised unit to give birth are confronted with the risks of birthing on the side of the road. Furthermore, this is complicated by the fact that travel on rural roads is dangerous anytime and given the nature of labour and birth, the risks increase rapidly.

Travel on rural roads is inherently dangerous. There are few petrol or breakdown recovery services and mobile phone coverage is often non-existent. Driving with sun in the eyes, kangaroos and livestock on dirt and potholed roads were just some of the dangers described. These roads are dangerous at any time, but given the nature of labour and birth, the risks increase exponentially. (Dietsch, et al., 2010, p. 4)

Due to the absence of a maternity unit in the local community, women in their study were denied the experience of early labour in their own home before going to their chosen birthplace, once they were in established labour. Instead of being able to focus on their labour, these women faced issues related to travel and the needs of accompanying children. They had to face the possibility of birthing in a very dangerous environment which could threaten their own and their newborns' safety. Dietsch and colleagues (2010) strongly recommended that the closure of maternity units in rural NSW must stop. Moreover, they concluded that reopening closed maternity units in rural areas would help reduce the risks of unsafe road travel and the deprivations experienced by rural women. The above studies have demonstrated that the closure or lack of maternity units in local communities has impacted women and families in many ways. Having to travel to access obstetric services which are no longer available in the local communities, women and families face financial burdens associated with travel, accommodation, loss of work time, child care cost, logistical, social, cultural and spiritual difficulties and the risks of

labour and birthing en route on unsafe road. However, all the studies focused on birthing services, antenatal and postnatal services for rural women are hardly mentioned in the literature. Thus, there is a major gap in the literature that this study will address. The impact of these issues is, however, clearly not merely physical. The next section presents psychological impacts of the lack of the maternity services on rural residents.

2.5.2. Psychological impacts

The last two studies in the previous section found that stress (Roach & Downes, 2007), anxiety and fear (Dietsch, et al., 2010) are results from difficulties that women encountered due to lack of access to maternity services in local areas. However these psychological impacts are much more evident and clear in a Canadian study (Kornelsen & Grzybowski, 2005). Using Maslow's hierarchy of needs as their theoretical framework, Kornelsen and Grzybowski (2005) investigated rural parturient women's experiences of obstetric care in the context of the social and economic realities of life in rural, remote, and small urban communities. Maslow's hierarchy of needs consists of five components which form the pyramid (Poston, 2009). Maslow established physiological needs over safety needs, safety needs over belongingness needs, belongingness needs over esteem needs. These needs form the first four components of the pyramid, and are addressed as deficit needs. Self-actualisation, the fifth component, addresses the need of being, which defines one's own place in the universe (Poston, 2009). According to Maslow, people are motivated by the desire to fulfil basic needs. The achievement of higher levels of need satisfaction is determined by our ability to meet lower-level needs. Unmet needs leads to a state of tension or anxiety in direct proportion to the deficit (Kornelsen & Grzybowski, 2005).

According to Kornelsen and Grzybowski (2005), their participants' self-identified needs were largely congruent with the deficit categories of Maslow's hierarchy of needs, which recognises the contingency and interdependence of physiological needs, the need for safety and security, the need for community and belonging, self-esteem needs, and the need for self-actualisation. In their study, expressions of

self-actualisation through giving birth were notably absent, which, they argued, is congruent with Maslow's assertion that lower-level needs must be met before higher-level needs, such as the need for self-actualisation. Crucially, these researchers have shown that when describing their unmet obstetric needs, all study participants spontaneously said that they had felt anxiety at every level of Maslow's hierarchy. At a physiological level, anxiety was associated with the absence of local services and the consequent uncertainty about contingencies. The inability to predict the circumstances of their delivery led to further stress which was again aggravated by the participants' inability to establish meaningful relationships with care providers in the referral locations. Stress arising from unmet needs for community, love, and belonging focused primarily on the possibility of partners and the significant others not participating in the experience because of logistical challenges presented by work and family. Women in their study developed strategies to reduce the risk of travel on uncomfortable roads (Kornelsen & Grzybowski, 2005). A common strategy was the seasonal timing of birth to minimize the need for winter travel. Another way was to undergo labour at home and arrive at the local hospital with the cervix fully dilated to eliminate the possibility of transportation to a referral community. Some women even considered unassisted home birth (Kornelsen & Grzybowski, 2005). Kornelsen and Grzybowski (2005) came to an important conclusion that:

removing maternity care from a community creates significant psychosocial consequences that are imperfectly understood but that probably have physiological implications for women, babies, and families (p. 252).

The most recent research conducted by Kornelsen, Stoll and Grzybowski (2011) supports the previous studies suggesting that lack of access to maternity care service is strongly associated with stress in rural parturient women. Utilising a cross sectional survey with the validated Rural Pregnancy Experience Scale, these scholars successfully quantified the extent of psychological stress and anxiety related to the lack of access. Kornelsen and colleagues (2011) once again have contributed important research findings to the literature. Their study suggested that parturient

women who have to travel more than one hour to access services are 7.4 times more likely to experience moderate or severe stress when compared to women who have local access to maternity services. Both financial issues and lack of continuity of care are causes in contributing to this stress. These findings are very important since they will help policy makers decide where services should be located to reduce the need to travel and the stress and anxiety associated with that.

The previous two sections have clearly indicated that ceasing obstetric services in rural communities causes significant psychosocial consequences for parturient women. However, those are not the only impacts that losing critical health services have on women and their families in rural areas. The next two sections will further present more information on these impacts.

2.5.3. Adverse outcomes for mothers and babies

As discussed earlier, people attach meaning to a place which has an impact on the sense of belonging and wellbeing that they feel. When local maternity services cease to provide pregnant women services they need, women are forced to travel to other places to give birth. This negatively affects the wellbeing of the mothers and their babies who have to leave their familiar environment, their support network to a larger centre to get obstetric services. Studies have suggested that the closure of maternity services in rural areas have been linked with adverse outcomes for mothers and babies (Kornelsen, Moola, & Grzybowski, 2009; Larimore & Davis, 1995; Nesbitt, Connell, Hart, & Rosenblatt, 1990; Sontheimer, Halverson, Bell, Ellis, & Bunting, 2008).

In a crucial population study, Nesbitt and colleagues (1990) conducted an investigation on the perinatal outcomes of women who left their local communities for obstetrical services in a rural area of Washington state, America. These researchers have contributed to the literature valuable research-based evidence about the association between lack of access and negative outcomes for mothers and babies. Their study showed that women living in communities with little or no obstetrical care available locally have greater rates of complicated deliveries,

prematurity and higher costs of neonatal care than their rural counterparts who deliver in local communities with greater access to care and facilities. Despite not being able to conclude that there is a causal relation between impaired access to rural obstetrical care and adverse perinatal outcomes due to the study design, Nesbitt and his collaborators offered some important hypotheses. They hypothesised that the increased stress – physiological and psychological – associated with travel and parturition in unfamiliar settings may interfere with the normal process of labour. Decades later, researchers (Kornelsen, et al., 2011) provided the first steps in uncovering the extent of psychological distress association with lack of local services as hypothesised by Nesbitt and his colleagues. They found significant rates of psychological morbidity associated with barriers to accessing maternity care (Kornelsen, et al., 2011). This might be considered as the physiological pathway linking to adverse perinatal outcomes.

A Canadian study (Kornelsen, Moola, & Grzybowski, 2009) on intervention rates and outcomes between women who live adjacent to maternity service units and women who have to travel for this care found the geographical effect on the wellbeing of women. Their study suggested that women from outside the hospital local health area (LHA) have an increased rate of induction of labour compared with women living within the hospital LHA. Rural parturient women who have to travel for care are 1.3 times more likely to undergo induction of labour than women who do not have to travel. Their study demonstrated that the lack of access to maternity services in local communities have negatively impacted the wellbeing of women who have to travel to access services.

The loss of rural obstetrical services not only has a negative impact on the wellbeing of mothers as shown in the above studies but also on that of the neonates and infants in the communities. Sontheimer and colleagues (2008) have added important knowledge to the literature in their study which indicated that the rates of low birth-weight neonates originating from service areas of hospitals that had ceased provision of birthing services increased significantly compared to data before hospital obstetric closure. Thus, they suggested that neonatal outcomes may have been impacted by the loss of rural obstetric services.

Increased frequency of low birth weight infants may be an indication that adverse health effects are increased. Efforts to understand this process and prevent negative outcomes are worthy of further research. Health care policies addressing these issues may be critical to rural community health. (Sontheimer, et al., 2008, p. 98)

In a cross-sectional study, Larimore and Davis (1995) took a different approach in exploring the impact of the availability of maternity care services on the infant mortality rates in rural counties in Florida. First, they evaluated the sufficiency of physicians providing maternity care in each rural county. They then constructed a mathematical model to compare physician availability with the infant mortality rates for each county, while controlling for socioeconomic variables (Larimore & Davis, 1995). Larimore and Davis found that there is a negative correlation in rural counties between availability of maternity care services and infant mortality which supports the earlier study by Allen and Kamradt (1991) in Indiana, USA. Their statistical analysis revealed that increasing infant death rates can be predicted by decreasing physician availability. They noted that:

Access to maternity care for women in rural Florida is a problem that could be hampering Florida's ability to reduce its infant mortality rate. Family physicians appear to be the most geographically distributed health care providers in Florida; therefore, strategies should be developed to recruit Florida's rural family physicians into maternity care. (Larimore & Davis, 1995, p. 392)

The above studies reported notable data and innovative statistical modelling in health care research. However, it is noticeable that they are all the United States' work. Although Australia is dealing with the same issue of the maternity care services as the America, comparable studies in Australia are absent. Thus, there is a research gap in the Australian literature.

2.5.4. Sustainability of rural communities

The loss of maternity services affects not only women, their babies and families physically, psychologically and adversely as discussed previously but also the rural community as a whole. Based on the available research in the literature and careful observations, Klein and colleagues (2002b) maintained that the loss of local maternity services releases a cascade of adverse consequences for mothers and babies and affects the sustainability of rural communities. As health professionals stop providing maternity care, women from less central communities must travel to a distant centre to get that care. As discussed, this may lead to an increased frequency of small premature infants and maternal and newborn complications. These complications dramatically escalate health care expenditure (Nesbitt, et al., 1997a). On the other hand, it is impossible for midwives to provide care in such communities because midwives need physician and institutional back-up to practise. Health care providers and the community suffer the loss of skills related to reproductive health and women's health due to the absence of maternity services. Communities find it even harder to attract and replace physicians and skilled maternity nurses. Farmer and colleagues (2007) noted that the role of remote and rural maternity units is intensified by the lack of alternative employment opportunities. Scottish surveys revealed that rural people invest strong feelings of pride in local services, linking their community's identity to their ongoing existence (Hope, Anderson, & Sawyer, 2000). Thus, existing residents of the community may try to move because of the lack of health care services.

McDermott, Cornia and Parsons (1991) suggested that rural hospitals make significant economic contributions to the communities they serve. Furthermore, Holmes and others (2006) have discovered that the closure of the sole hospital in the community has a significant negative effect on the community such as reduced per-capita income and increased unemployment rate. In addition, the local hospital is often an important employer, sometimes the largest employer, in a small community. Maternity units have been seen as an "added symbolism for rural communities in which they signify youth and vibrancy within an aging rural demographic" (Farmer, et al., 2007, p. 67). A maternity unit's downgrading or

closure has a significant impact on the socio-economic vitality of the community (Rural Doctors Association of Australia, 2006). Klein and colleagues (2002a) recognised:

The community itself becomes dysfunctional and unstable. Maternity and newborn care is realised too late as being a linchpin for sustainable communities, medically, socially, and economically. (Klein, et al., 2002b, p. 1179)

2.6. Underpinning theory of the literature reviewed

Feminist theorising has allowed a focus on women and their experiences (Alston, et al., 2006). Feminists suggest that while sex is biologically determined, gender identity is socially constructed through the societal expectations placed on men and women in a relational context (Wearing, 1996; Wharton, 2005). The way rural women and men live their lives is shaped by gender constructions and discourses (Alston, 1995; Leipins, 2000). Consequently, gender is a key determinant of health status (Smith, 2004). Women are often the most frequent users of health services because of both their biological role such as pregnancy and their social or gendered roles such as caring which frame their broader conceptualisation of health and wellbeing (Rogers-Clark, 1998). Moreover, women are more likely to be responsible for the health of their family members such as children, but often ignore their own health status (Alston & Kent, 2004). While feminist theorising enables an exploration of these issues, it also allows a focus on the way health care and provision of health services is gendered (Alston, et al., 2006). Therefore, a feminist perspective provides a challenge to both medical discourse and the premises on which it is based (Rogers-Clark, 1998).

The women's health movement developed as a response to the ideological and practical deficiencies within the medical approach to women's health care (Rogers-Clark, 1998). It pointed to ways the medical model has interfered to reduce women's power around health decision-making (Hunt, 1998). The women's health movement allows an appraisal of the way women's health is influenced by social

factors such as lack of health services, public transport and social isolation (Warner-Smith & Brown, 2003). Failing to address these issues regarding health leads to a lack of attention to women's own health priorities. According to Hunt (1998) mainstream of health provisions rarely address quality of life issues and seldom account for difference in opportunity deriving from the social context of consumers' lives. This failure is significant in the Australian rural condition (Alston & Kent, 2004). Thus, "adopting a feminist perspective where women are in the centre and gender is a key analytical construct may allow a more searching appraisal of rural health disadvantage and a broader understanding of the emotional, social and spiritual wellbeing of rural Australian women" (Alston, et al., 2006, p. 3).

Beckett (2005) describes the feminist perspectives on childbirth in terms of three historical developments which are referred to as 'the three waves'. In the first wave (Blank, 1984; Reissman, 1983), feminist activists focused on the relationship between childbirth and pain and they viewed the right to pain relief as an essential issue. The discussions tended to deal with pain suffering and the control of childbirth process through the use of drugs. It called for responsive and respectful medicine, expanded choices in childbirth, and control over human body and reproductive life.

In the second wave (DeVries, 1996; Sullivan & Weitz, 1988), feminist birth activists focussed on the role of the (male) medical profession in the relocation and transformation of childbirth. The feminist view was that high levels of intervention are considered problematic because obstetric intervention often results from misleading indicators of risk or narrowed definitions of normality, and because they may diminish women's capacity to make meaningful choices regarding their birth deliveries.

In the third wave (Kubasek, 1997; Treichler, 1990), it was argued that that the use and experience of technology during pregnancy and birth may be empowering for women and medicalization is not necessarily incompatible with women's interests. The concept 'natural' in childbirth has been questioned. They argued that attempts to revive traditional birthing practices or legitimate new ones on the grounds that

those practices more closely approximate 'nature' are misguided. Feminist theory puts women in the centre of their care throughout the period of antenatal, birth and postnatal and aims at live healthy mother, baby and satisfaction of mother/family.

An alternative theoretical construct to feminist perspective is medical model which can be seen as part of a wider civilising process and of gaining control over nature (Porter, 2000). It is argued that the more civilised humans get, the further they move away from nature. This can be seen in arguments over pain relief in childbirth: some women choose epidurals rather than natural intervention-free labours because they fear the pain and because they believe that epidurals are safe (Mead, 2004; Robertson, 1994). This has been explained as women retaining control by giving up their bodies to the professionals to be managed by them (Zadoroznyi, 1999). In addition, according to Robertson this can be explained as women having little confidence in their bodies and their ability to birth safely and without intervention and medical support (Robertson, 1994). Fear of pain in labour is another manifestation of the dilemma (Downe, McCormick, & Beech, 2001; Mead, 2004). In the medical model, the period of having a baby including antenatal care, childbirth and postnatal care requires medical control over and monitoring of the situation in order to ensure safety. This is to enable intervention at the earliest sign of pathology, as childbirth is 'normal only in retrospect' (Savage, 1986).

Feminist theorising and the medical model can be in conflict due to different approaches and philosophy in maternity care. While feminist theory focuses on natural births to enable women make meaningful choices and to enhance control over their bodies and the process of childbirth, the medical model tends to interfere and restrict women's power in their antenatal, childbirth and postnatal care. Feminist theorising and/or the medical model of maternity care underlie the literature reviewed. The reviewed studies aimed to find out the impacts of the lack of maternity services access on rural women and their babies either in terms of health/medical outcomes (medical model) or other social outcomes (feminist theorising). The impacts of the lack of rural maternity services on the health outcomes for women and babies have been widely researched using powerful

statistic tools. Those studies have contributed valuable knowledge to the field indicating that rural women are disadvantaged in health care because health services are not meeting their needs in maternity care. However, studies on the social needs of rural women in maternity care are limited in the literature. Some studies only focus on the specific aspects of rural women's needs such as access and their preferences in the models of maternity care and mainly on birthing services. An extensive literature search revealed only one, Canadian study (Kornelsen & Grzybowski, 2005) which investigates rural women's needs in maternity care using a qualitative method. In Australian literature, especially Tasmania, there is no study which examines the systematic needs of rural women in the full spectrum of maternity care from ante natal through to post natal care, the services available to them and identifies the gaps between those needs and services. Thus, this study will go some way to filling these important gaps in the literature. The study will contribute to the understanding of maternity care needs of rural women in terms of social aspects. Moreover, it will make a contribution to the understanding of the services available to and used by rural Tasmanian women and identifying how services could more closely match women's needs in maternity care. Finally, the study will provide the health care system with recommendations and suggestions which would help with better planning and implementation of health service provision in rural areas.

2.7. Synthesis

The review of policies has revealed the principles of equity and universalism which underpin the health system at national and state levels. However, there is evidence in the literature suggesting that these principles have not been achieved in rural and remote settings. In addition, national and state policies emphasise the long-term goal of having a sustainable health system. At state level, the Tasmanian Government has put in place health recruitment strategies to address the shortage and ageing of the health professional workforce. There are two main theoretical perspectives underpinning the literature reviewed feminist theorising and the medical model. The literature suggests that the closure of health services may be

justified by the medical model which enables health professionals in major hospitals to be in control over the care of women. While the studies have revealed gaps from women's perspectives are from a feminist stand point believing in the philosophy that pregnancy and childbirth are natural life event and women should be in control of their own bodies.

The review of literature indicates three main interrelated reasons which have led to the loss of obstetric services in rural communities including the shortage of health workforce, safety and quality concerns and cost considerations. The closure of rural obstetric services has had many impacts on rural women, families and communities. Firstly, being forced to travel away from their own communities to give birth, women and their families encounter significant financial burdens, travel difficulties and the risks of labour and birthing en route on unsafe roads. Secondly, losing the obstetric services in rural communities causes significant psychosocial consequences for parturient women such as stress, fear and anxiety. Furthermore, the closure of maternity services in rural areas has been associated with adverse outcomes for the mothers and their babies. Lastly, the loss of local maternity services affects the sustainability of rural communities, and rural health services in particular.

2.8. Conclusion

Literature review plays an important role in a research study. It provides a conceptual and contextual background on which a research project is situated and it marks the beginning of a research journey. In this literature review, a number of important issues have been identified and discussed including the impacts of the absence of small rural maternity units, the reasons behind the closure of these critical health services in rural communities and the universal health system. The literature review has identified a gap in our understanding of rural maternity needs and how services can or should meet these. The next chapter will present a different and equally important aspect of this research study: research methodology. The discussion will focus on the methods used in data collection and data analysis.

Chapter 3: Research Methodology

3.1. Introduction

Methodology refers to the general principles of investigation that guide a study, based on its underlying theoretical and philosophical assumptions. These principles will dictate that certain designs and methods are appropriate and other designs and methods inappropriate. (Sim & Wright, 2000, p. 1)

This chapter starts with the conceptual framework of the study as this is the backbone of the thesis and provides the sound foundation for the research design. It is followed by the research design which focuses on the rationale for adopting a mixed methods approach, aspects of data collection and data analysis. Finally, ethical considerations for the study are discussed.

3.2. Conceptual framework

A conceptual framework which is a key part of the research design consists of the system of concepts, assumptions, expectations, beliefs, and theories that supports and informs the research (Miles & Huberman, 1994). The conceptual framework covers the main things to be studied including the key factors, concepts and the presumed relationship among them (Miles & Huberman, 1994). According to Smyth (2004), the conceptual framework becomes the heart of the study as the research gains momentum. It increasingly scaffolds, strengthens and keeps the research on track by (i) providing clear links from the literature to the research goals and questions, (ii) informing the research design; (iii) providing reference points for discussion of literature, methodology and analysis of data; and (iv) contributing to the trustworthiness of the study.

The review of the literature as well as the objectives of the study have provided a sound foundation for the conceptual framework of the study. The framework

conceptualised is designed to address the research gaps identified in Chapter 2. As stated in the conclusion of that Chapter, these gaps are in relation to: understanding the maternity care needs of rural women from the viewpoints of the women themselves and expert health care professionals; understanding the services available to and used by rural Tasmanian women; and identifying how services could more closely match women's needs. The conceptual framework of the study has been constructed and is illustrated in *Figure 3-1*.

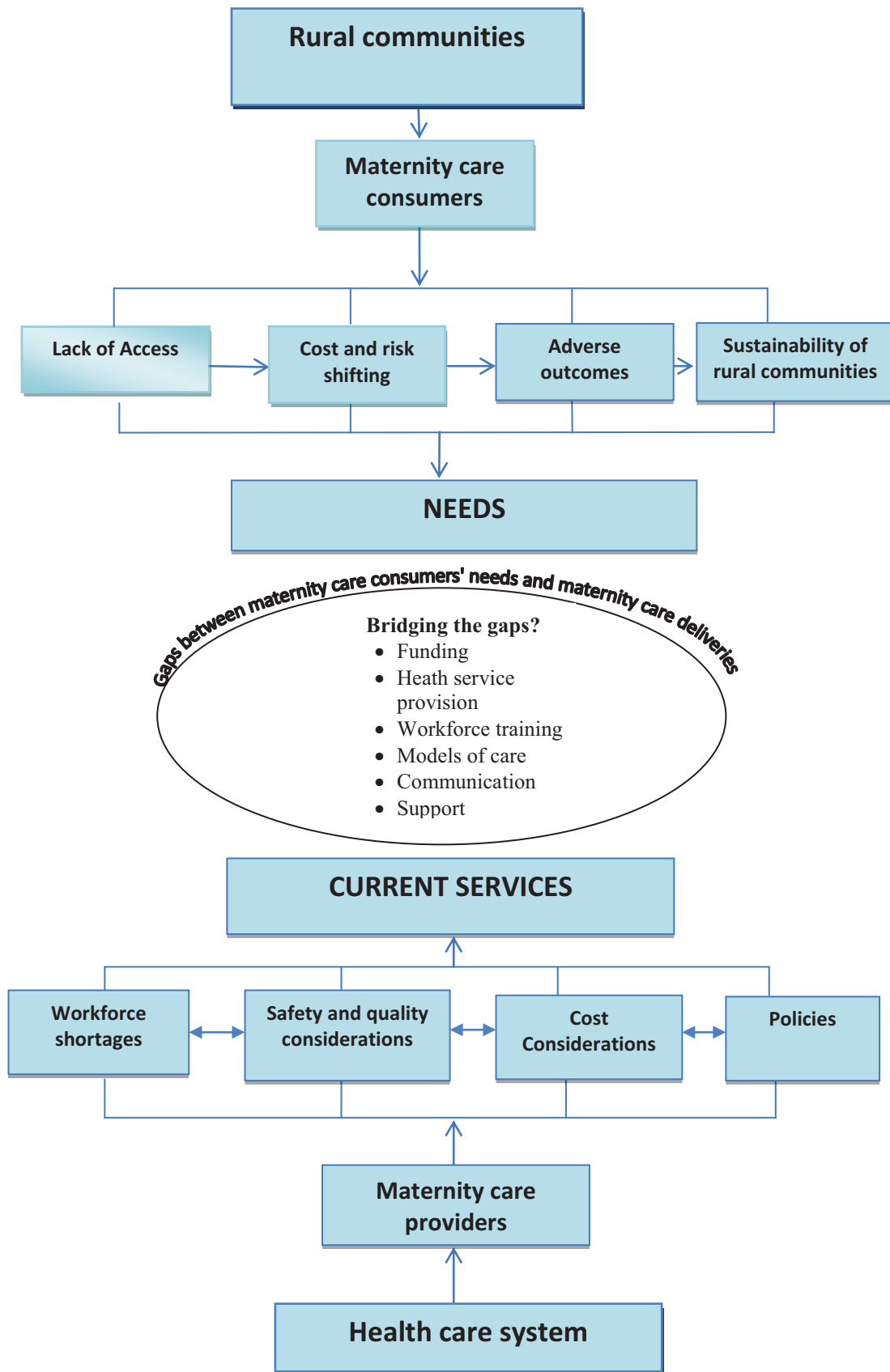


Figure 3-1: Conceptual framework

As shown in the figure, the framework of the research is constituted of three components. The first component concerns the needs of rural women who are the consumers of the maternity care system. This part includes four main themes informed by the literature namely (i) lack of access, (ii) cost and risk shifting, (iii) adverse outcomes and (iv) sustainability of rural communities. These issues and their relationship have been described in detail in section 2.3.

The second component of the framework is about the health care system. The maternity care provision in rural areas has been affected by the health system constraints including shortages of health care workforce (see section 2.4.1), safety and quality considerations (see section 2.4.2) and cost considerations (see section 2.4.3). In addition, the maternity care provision in rural areas has been influenced by the health care policies (see section 2.2.4). As explained in these sections, all these four aspects in the second component of the framework (the health care system) are interrelated and affect the maternity service provision in rural areas.

The third component which is the centre of the framework is the gaps between the needs of rural women in maternity care and the maternity service provision. If the rural women's needs in maternity care are not matched by the maternity care service provision, there will be gaps between them. In order to bridge the unmatched gaps between consumers and providers, the health care system would need to address to the system's challenges and respond to the consumers' needs. Possible solutions may include funding, workforce training, using different models of care, communication and support.

In order to address the identified gaps in the literature as well as to achieve the objectives of the study, the three research questions (RQ) have been formulated as follows:

- RQ1: What are maternity care needs of women in rural Tasmania?
- RQ2: What are the existing maternity services for rural women in Tasmania?
- RQ3: What are the gaps between the women's needs and the services delivered?

The first component of the framework addresses the first research question which identifies rural women's needs in maternity care. The second component focuses on the current maternity service provision for rural women and relates to the second research question which examines the current maternity care system. The third component identifies any gaps between the consumers' needs and service provision which, in turn, relates to the third research question.

As mentioned earlier in this chapter, this conceptual framework plays a central role in the study as it provides clear links from the literature to the research questions and informs the research design. Furthermore, the framework guides data collection from both maternity consumers and maternity providers to assist in the comparative process. The framework is conceptually aligned with the methodology and epistemology driving the study so it provides a suitable backbone for the thesis, in line with the broad aims of the study (Smyth, 2004). As the study progresses, the conceptual framework provides reference points for making meaning of the data, structuring the research findings and discussion. Before the research design of the study is explained in detail, it is important to understand the maternity care system in Tasmania as it will provide background information for the design of the study.

3.3. Research design

Researchers begin a project with certain assumption about how they will learn and what they will learn during their inquiry or they state their knowledge claims. Philosophically, researchers make claims about what is knowledge (ontology), how we know it (epistemology), what values go into it (axiology), how we know it (rhetoric), and the process for studying it (2003a). There are four schools of thoughts about knowledge claims namely postpositive, socially constructed, advocacy/participatory and pragmatic knowledge claims. The first school of thought, postpositive knowledge claims reflects a deterministic philosophy in which causes probably determine effects or outcomes. Postpositivists intend to reduce the ideas or problems into a small, discrete set of ideas to test hypotheses or research questions. The knowledge that develops through a postpositivist lens is based on a

careful observation and measurement of the objective reality that exists in the world.

The second school of thought about knowledge claims is socially constructed knowledge claims. Under this assumption, researchers develop subjective meanings of their experience directed towards certain objects. These meanings are varied and multiple, leading the researchers to look for the complexity of views rather than narrowing meanings into a few categories or ideas (2003a). The goal of research is then to rely as much as possible on the participants' views of the situation being studied. Rather than starting with a theory as in postpositivism, researchers generate or inductively develop a theory or pattern of meanings.

The next school of thought about knowledge claims is advocacy or participatory knowledge claims. The advocacy researchers claim knowledge through an advocacy or participatory approach. They felt that the postpositivist assumptions imposed structural laws and theories that did not fit marginalised individuals or groups or did not adequately address issues of social justice (2003a). These researchers proceed collaboratively so as to not further marginalise the participants. This advocacy may mean providing a voice for these participants, raising their consciousness or advancing an agenda for change to improve the lives of the participants.

The last school of thought about knowledge claims is pragmatic knowledge claims (Creswell, 2003a). Under this orientation knowledge claims arise out of actions, situations, and consequences and research problems are the most important instead of methods. As a philosophical underpinning for mixed methods study, researchers convey the importance for focusing attention on the research problem in social science and then using pluralistic approaches to derive knowledge about the problem (Creswell, 2003a). In order to investigate the research questions or fully understand women's needs in maternity care and the gap between these needs and services delivered in rural areas in Tasmania, the study adopted this approach as its research paradigms. Feminist theory and grounded theory are the theoretical perspectives which have informed the methodology of the study.

In order to achieve the objectives of the study, a reliable and valid research design is crucial. Research design involves planning and executing a research project - from identifying the problem through to reporting and publishing the results (Punch, 2005). According to Creswell (2003c), research designs are the plans and procedures for research that cover the decisions from broad assumptions to detailed data collection methods and analysis. Research design includes three levels namely research approach, research methods, and data collection.

The first level of the design is the research approach. Research approach is a perspective based on a set of assumptions and concepts held by researchers (Johnson & Christensen, 2004). Traditionally, there are two widely used research approaches, namely quantitative and qualitative methods. If the study is testing a hypothesis or examining relationships between variables, a quantitative approach is considered to be most suitable. Pure quantitative research is considered a deductive or confirmatory scientific method because the whole research process aims to test or confirm the hypotheses and theories. On the other hand, a pure qualitative approach is an inductive scientific method and is more appropriate if the researcher would like to explore and discover a new concept or phenomenon in a social context (Johnson & Christensen, 2004). Qualitative researchers tend to be more subjective as they have to be involved in the issues they investigate. By contrast, quantitative researchers generally hold objective views to observe the world. Quantitative researchers often adopt standardised questionnaires and quantitative measuring tools to measure objectively what is observed. On the other hand, qualitative researchers have to collect data, conduct interviews and to interpret what is being studied (Johnson & Christensen, 2004). However, Creswell (2003b) recognised that any single method, be it a qualitative or a quantitative method, has limitations and biases in its own right. Qualitative and quantitative researchers had to deal with the methodological issues that Rapport (Rapport, 2004, p. 1) raised in the following:

Qualitative researchers are criticized for producing ineffective interpretations, based on researchers' subjectivity. Quantitative researchers are criticized for being steeped in "naïve objectivity", for

concentrating on causal explanations and standardized outcomes and for being ineffectual in describing social construction, cultural change or individual experience.

To overcome the limitations of each method, researchers combine the two methods in order to neutralise or cancel the biases of other method. Combining quantitative and qualitative techniques provides complementarity between breadth and depth and between generalisation and targeting specific populations (Frechtling, Sharp, & Westat, 1997). Moreover, for certain studies, in order to achieve a complete explanation, researchers have to use both deductive and inductive methods. They might make a hypothesis objectively deducted from a current theory and then collect data through the quantitative tools to determine whether the hypothesis is supported. Subsequently, qualitative data would be collected through interviews to provide explanatory and complementary information (Creswell & Plano-Clark, 2007).

Due to the advantages of combining qualitative and quantitative methods as discussed above, a mixed methods approach was utilised to investigate the study's research questions. A quantitative technique can yield representative information about women's needs in maternity services in rural Tasmania. On the other hand, a qualitative technique can validate and interpret the information obtained from the other method. The combined results from both methods enable the researchers to not only make generalisations about the women's needs and preferences in maternity services, but also to investigate in depth these needs and identify gaps between their needs and existing services in rural areas. It provides "a more complete picture by noting trends and generalisations as well as in-depth knowledge of participants' perspectives" (Creswell & Plano-Clark, 2007, p. 35). Thus, a mixed research approach was considered as the most suitable for this study. Figure 3-2 provides an overview of the design of the study.

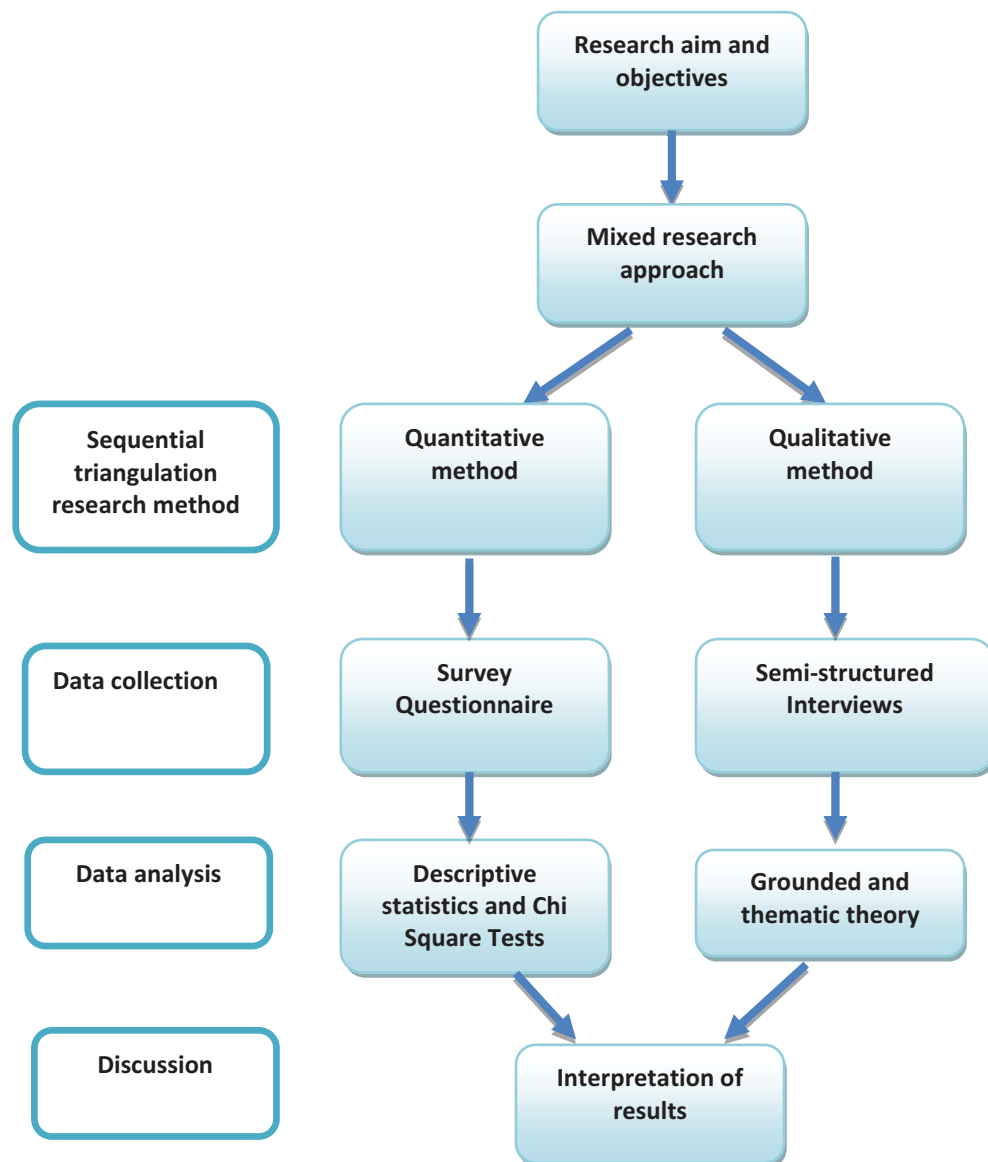


Figure 3-2: Overview of study design

As illustrated in the diagram, the mixed methods study, which is the combination of the quantitative and qualitative approach, was employed in order to achieve the research aims and objectives. In this study, quantitative and qualitative research were carried out sequentially. A survey questionnaire with women who had childbirth experiences and lived in rural Tasmania at that time was chosen as the data collection instrument for the quantitative approach, and which was conducted first. Semi-structured interviews were used for the qualitative data collection. The interviews were conducted with both rural women and health care professionals.

After the data collection was complete, quantitative and qualitative data were analysed separately using different techniques. The results from both research approaches were integrated and interpreted in the discussion section. The sections below present each research approach in detail.

3.3.1. Quantitative approach

Illustrated in *Figure 3-3* is an overview of the quantitative approach used in this study. It presents the whole process of the quantitative method including the pilot study, data collection, data management and data analysis. Each stage of the process is explained in detail in the sub sections below.

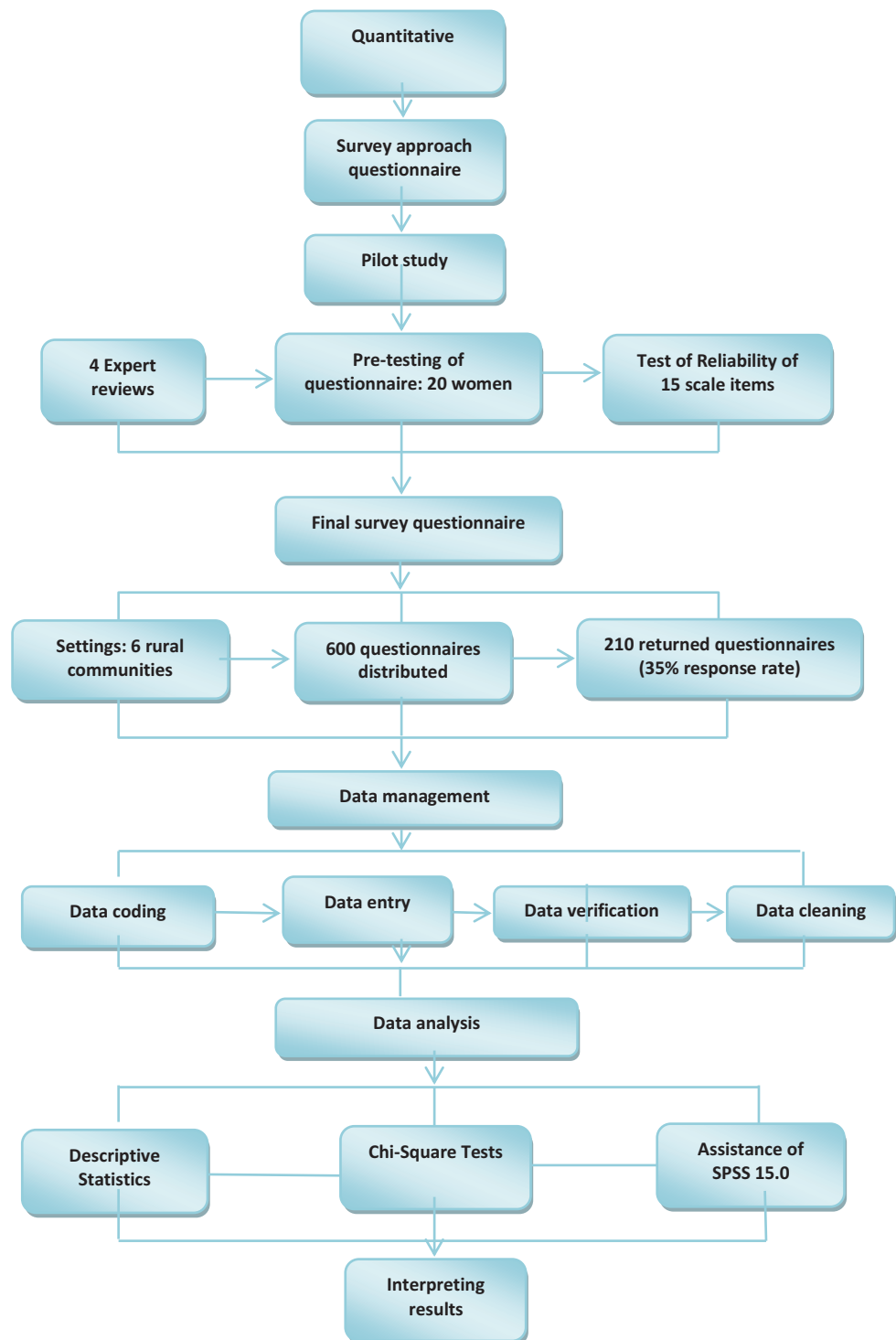


Figure 3-3: Overview of quantitative approach

3.4.1.1 Survey questionnaire

Survey questionnaires were chosen for the study as they offer many advantages and ensure respect and confidentiality for the participants. There must be assurances that “informed consent” has been obtained as “an important safeguard” for the respondents and that there has been no element of “deception, invasion of privacy and participants’ rights” (Graziano & Raulin, 2000, p. 66). Salkind (1997, p. 149) comments that anonymity is useful as “people may be more willing to be truthful, because anonymity is all but guaranteed”. With regard to cost, a survey is a less expensive method of collecting data, especially when the number of people to be surveyed in the study is relatively large. Although a survey was selected for the data collection process, the disadvantages of this method should be recognised, including a low response rate and incorrect responses due to respondents’ misunderstanding of some questions. However, these are not the concerns of this study as the response rate is reasonable (35%) (White, 1999) and the survey was fully validated by a pilot study before its administration.

3.4.1.2. Developing a survey questionnaire

3.4.1.2.1. Structuring of the survey

The purpose of conducting a survey is to seek answers for the two research questions which investigate women’s maternity needs (RQ1) and existing maternity services for those women (RQ2). To serve this purpose, the survey questionnaire was designed. The questions in the survey were guided and informed by the developed conceptual framework of the study. The survey consists of 41 questions including 15 scale questions and is divided into four parts as illustrated below.

- Part A (questions 1 to 6) is about the respondent’s demographic background, such as their age, level of education.
- Part B (questions 7 to 32) asks the respondent about their most recent experiences of maternity services. This part covers the respondent’s experience of the services from antenatal to early postnatal care.
- Part C (questions 33 to 41) surveys the participant’s views on maternity services in rural areas.

- Part D invites the respondents to write their comments on the services in their local areas and about maternity services that they would like to have available in the future.

The finalised questionnaire is found in appendix 3.

3.4.1.2.2. Pilot study

Prior to the full implementation of the questionnaire, a pilot study was conducted. Conceptually, the purpose of a pilot study is to detect and improve weaknesses in research design such as ambiguous questions that can have an influence on the procedure. Many researchers advocate a pilot study to validate the research procedures during the phase of data collection (Glesne & Peshkin, 1992).

Researchers choose to conduct a pilot study for many reasons. Firstly, it enables a researcher to confirm the appropriate research structure and to review the research procedures. Thus, the researcher then can review the whole research approach and rework the research design for the last time before conducting the study (Glesne & Peshkin, 1992). Secondly, it is possible to incorporate suggestions and feedback from experts in the field and make adjustments to the questions and research design. Consequently, well-developed research tools and a correct research procedure would result. Finally, conducting a pilot study created an opportunity to enhance the validity and reliability of the main research.

Due to the above advantages of a pilot study, the questionnaire in this study was piloted through two stages namely (i) experts review and (ii) pre-testing of the questionnaire.

3.4.1.2.3. Expert review of draft questionnaire

It is important for experts in the field to review and comment on a questionnaire (Bowling, 2002). Four experts who were identified as having expertise relevant to this field of research agreed to review the questionnaire. A review package was sent to the experts by email and contained (i) the brief background and the aims of the study and (ii) a draft questionnaire.

Comments and suggestions were provided by experts through emails. The general comments related to the wording and sequence of the questions. Some questions needed to be re-worded and organised in a logical sequence. For example, question 20 which asked participants about the type of delivery they had, was adjusted according to the suggestion of one expert, to make it clearer and more concise. Another feedback was that the options in question 2 sounded too academic. The expert suggested that the option “post graduate degrees” should be amended to “university” and the options should start from lower level of education. Another suggestion was to remove the question about respondents’ cultural ethnicity as it did not relate to the aims of the study.

3.4.1.2.4.Pre-testing of questionnaire

After the experts’ feedback had been incorporated into the questionnaire, it was pre-tested prior to its full implementation. The purpose of pre-testing the questionnaire is to test whether participants understand the questions and to identify any other issues that might arise. Twenty participants were invited to test the questionnaire. The questionnaires were distributed with comment sheets so that the participants could provide their recommendations and endorsements for the final version of the questionnaire regarding the content of the questions and their own personal experiences. The researcher asked the participants how long it actually took them to complete the survey for estimation of the average completion time.

After conducting the pre-testing of the questionnaire, some useful suggestions were received. Some respondents suggested that the researchers should provide more space for written comments on the questionnaire. This suggestion was really helpful since over 150 written comments were received from the actual survey. Moreover, one participant suggested the helpful hint that a simple sentence “Please turn over” should be inserted at the end of each page to remind readers not to miss a page. All participants in the pilot study agreed that the survey would take less than 10 minutes to complete.

3.4.1.2.5. Reliability of scale items

The reliability of 15 scale questions in the questionnaire was tested using Cronbach's alpha. Cronbach's alpha is an index of reliability associated with the variation accounted for by the true score of the "underlying construct". Construct is the hypothetical variable that is being measured (Hatcher, 1994). The higher the score, the more reliable the generated scale is. Nunnally (1978) has indicated 0.7 to be an acceptable reliability coefficient. When the questionnaire was piloted the 15 item scale completed by 20 participants was run in SPSS to test its reliability. The overall alpha is 0.746 which is good considering that 0.7 is the cut-off value for being acceptable.

3.4.1.2.6. Final questionnaire

Following the completion of the above steps, the final survey questionnaire consisted of 41 questions in three parts, A, B and C. Part D invited participants to write their own comments on maternity services they would like to have in their areas. It is worth noting that this part brought a lot of valuable qualitative data as there were more than 150 (out of 210) returned surveys with extensive written comments on the needs of women in rural Tasmania. The structure of the final questionnaire is presented in table below.

Table 3-1: Structure of the Questionnaire (see Appendix 3 for detail)

Part A: About participant	Items 1 – 6 Age group? Level of education completed? Language normally spoken at home? Aboriginal or Torres Strait Islander background? When did you have your most recent baby/babies? How far was the nearest maternity unit at the time of your most recent baby's birth?
Part B: Experiences of maternity services	Antenatal care: Items 7-17 Labour and delivery services: Items 18-21 Postnatal care: Items 22-32.
Part C: Views on maternity services in rural areas	Items: 33-41
Part D: Your own comments The survey invites the participants to write their own comments and suggestions about maternity services.	Is there any else about maternity services in your area that you would like to tell us about? Is there anything else that you would like to tell us regarding maternity services that you would like to have available in the future?

3.4.1.3. Quantitative data collection

3.4.1.3.1. Sampling methods and setting

There are several different sampling methods including random sampling, cluster sampling and stratified sampling (Selvanathan, Selvanathan, Keller, & Warrack, 2007). Random sampling is a sample in which each member of the population is equally likely to be included. However, when the population is very large, it becomes difficult or impossible to identify every member of the population so the pool of available subjects becomes biased. The second method, cluster sampling, is a simple random sample of groups or clusters of elements. A cluster sampling technique is particularly useful when it is difficult or costly to develop a complete list of the population members. The last sampling method is stratified random sampling, which is obtained by separating the population into mutually exclusive sets or strata and then drawing simple random samples from each stratum. This is a commonly used probability method and is superior to random sampling because it reduces sampling errors. Moreover, besides acquiring information about the entire

population, it is also possible to make inferences within each stratum and to compare strata.

Stratified random sampling was adopted for this study because of its advantages as stated above. The criteria for separating rural women in Tasmania into strata are their location and the travel time to the major public hospitals which provide full maternity services. These criteria helped the researcher to identify maternity needs of rural families across the state.

Six rural communities in Tasmania including Beaconsfield, Sheffield, Nubeena, Oatlands, Zeehan and Dover were chosen to conduct the survey using stratified random sampling. These communities were selected because of their limited maternity care services for women. The travel time ranges from 41 minutes to more than 2 hours from these communities to the major hospitals. As mentioned earlier, there are three major hospitals which are located in Hobart, Launceston and Burnie providing maternity care for women in Tasmania. The map in Figure 3-4 illustrates the selected study locations and the travel time to the nearest major birthing hospital.



Figure 3-4: Study locations and major hospitals

Source: Google Map (2011)

3.4.1.3.2. Survey criteria and recruitment process

The selection criteria for participants were:

- being a female over 18 years of age;
- having had childbirth experience; and
- living in a rural area of Tasmania at the time of giving birth.

It is important to note that the childbirth experience of the women in this survey ranged from several years ago to very recently. The surveyed women were organised into two groups. The first group consists of women who have had childbirth experiences within the last five years and the second group more than five years ago. It is also worth noting that the interviewed participants were from the first group. The previous chapter on the literature review revealed that small rural birthing services have been downgraded or lost in recent decades. How has this closure affected women's childbirth experience? How different might women's maternity experiences be according to the length of time since their last childbirth experience? By including various groups of women with different lengths of time since their last childbirth experience in the sample, the study will be able to examine those questions. One might query the accuracy of the information that those women provided in the survey, since they might have given birth a long time ago and might not remember what happened in the past. However, studies have found that years later, women's memories of childbirth are generally accurate, and many are strikingly vivid (Simkin, 1991, 1992). The survey participants were recruited from health and child care centres in the selected communities. Through those centres, 600 surveys were distributed to women who met the selection criteria. The survey was also available online for participants who wished to complete it online as an alternative to hard copies. When the survey was closed, a total of two hundred and ten (210) questionnaires were returned including 29 questionnaires being completed online. This represents a response rate of 35%.

3.4.1.4. Quantitative data management

Data coding

Coding is a method of conceptualising research data and classifying it into meaningful and relevant categories for the respondents in the study (Bowling, 2002). The coding frame was set up after the data was collected. The basic rules for the development of the coding frame were that the codes were mutually exclusive, coding formats for each item were comprehensive and the codes were applied consistently (Bowling, 2002). The number of digits assigned for each code depends on the variables. For instance, as the maximum number of the respondents was 210, the code for ID was three digits. It is common in quantitative research to use the codes 9 or 99 or 999 for inadequate or missing responses. This was also applied in this study. The missing responses were coded 999. A master copy of the questionnaire was made as a code reference prior to data entry for data analysis purposes.

Data entry

Data entry was conducted by the researcher who has had experience in data entry from both her previous employment and her Master's degree. The data from each survey was entered into the dataset against each ID number using Statistical Package for the Social Sciences (SPSS) version 15 for data analysis. Each variable referred to a single item of the scales needed to be labelled prior to the data analysis process. Each code for each item remained the same when the data was entered. For example, Primary school was coded as 1, Secondary 2, University 3, Other 4. A new code was given when a new variable was created.

Data verification

To verify data and detect any entry mistake, 10% of the original sample size (21 questionnaires) was randomly selected from the total sample of 210. The data verification was processed in SPSS DATA Entry Builder 4.0 by an external experienced data entry person. There was 0.21 per cent of disagreement between the researcher and the verifying data entry. The data was checked for any discrepancies between the two sets of coding and mistakes were corrected. The

researcher and the data entry professional discussed to resolve any differences in the two data sets to reach an agreement.

Data cleaning

In order to eliminate any errors that may occur during the data collection, coding and data entry, data cleaning started once the data entry was finished. The study followed a standard procedure for data cleaning using two types of checks. Firstly, the outliers and wild codes were checked by inspecting frequency distributions and data ranges (i.e., MIN or MAX value of each variable). Secondly, the internal data consistency was checked by checking the filter questions for impossible combinations and inconsistent values and meanings.

3.4.1.5. Quantitative data analysis

The previous sections have described the procedures of data collection in detail. This section discusses the process of data analysis. The study employed both descriptive statistics and inferential statistics to analyse the survey questionnaires. Firstly, information on the profile of participants, maternity care experiences and preferences of women was obtained by descriptive statistics. Descriptive statistics deals with methods of organising, summarising and presenting data in a convenient and informative form (Selvanathan, et al., 2007). These methods make use of graphical techniques and numerical descriptive measures such as means, standard deviation and ranges, to summarise the information in a meaningful way. Secondly, inferential statistics was utilised for further analysis of the relationship between the participants' socio- demographic background and their experiences and preferences in health care. Inferential statistics is a body of methods for drawing conclusions about characteristics of a population, based on information available in a sample taken from the population (Selvanathan, et al., 2007). This allows the researcher to make inferences about the issues that are critical and important to women especially in rural contexts. Inferential statistical techniques such as Chi Square test are applied, where possible, to analyse the key factors that influenced the respondents' experiences and preferences towards maternity care.

The analysis of the survey questionnaire was conducted with the assistance of the computer application SPSS version 15 (SPSS 15.0, 2006). The detailed analysis process and results drawn from the quantitative data will be presented in Chapter 4.

3.3.2. Qualitative approach

An overview of the qualitative method is illustrated in Figure 3-5. Sub-sections are presented on study population, setting, inclusion criteria, exclusion criteria, recruitment, data collection processes, technical aspects, field notes, rigor, and data analysis.

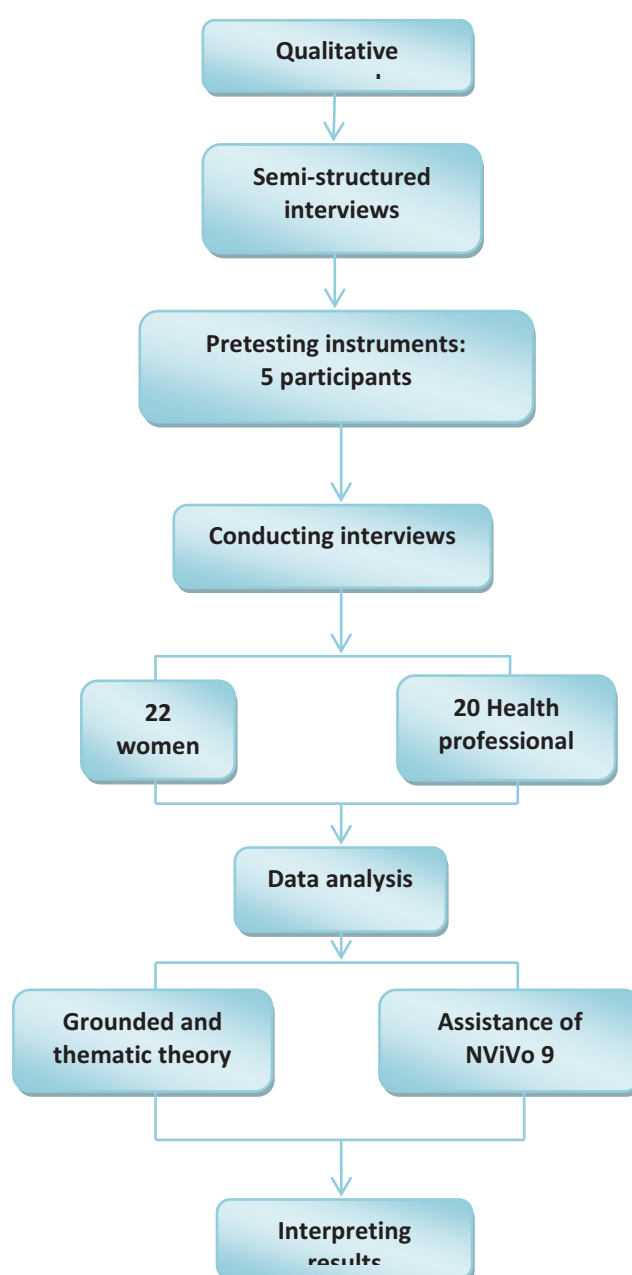


Figure 3-5: Overview of qualitative approach

3.4.1.6. Semi-structured interviews

There are at least three different types of interviews described in the qualitative research literature. These are in-depth unstructured interviews, standardised interviews and semi-structured interviews. Each of these is associated with certain methodological perspectives and issues being investigated, the social context for the research, and the characteristics of the research participants and the style of the researcher (Hansen, 2006).

Firstly, unstructured in-depth interviews are 'shared experiences in which researchers and interviewees come together to create a context of conversational intimacy in which participants feel comfortable telling their story' (Corbin & Moore, 2003). This procedure was not applicable to this research as Hansen (2006) commented that the purpose of in-depth interviews was not to get answers to questions to evaluate or test hypotheses, instead they reflected an interest in understanding other people's experiences. Thus, unstructured interviews were less useful to this project since this study had a focus on issues which were relevant to the research aim and objectives.

Secondly, structured or standardised interviews aim to collect data that is already coded or quantified. Interviewers use a list of questions with a limited choice of closed response categories (Hansen, 2006) and therefore researchers cannot capture any new themes that may emerge. This type of interview did not suit this study as the other method – quantitative method – already covered those types of questions.

Finally, semi-structured interviews were employed in the study because they focused on specific issues and the flexibility to explore further and accommodate the meaning making process of the interviewees. The interviewer used a list of open-ended questions leaving the interviewer free to ask additional questions during the interview and to respond to issues or questions raised by the interviewees (Hansen, 2006). This type of interview allowed the researcher to explore in-depth women's experiences in maternity care and any new themes that

may arise. Semi-structured interviews were also efficient in terms of time, as they guided the interview within the broad area of interest. Semi-structured interviews were conducted with both health care consumers (women) and health care providers (health professionals) to examine the needs of women in maternity care and existing services.

3.4.1.6.1. Interviews with women

Inclusion criteria

The selection criteria for participants were:

- being a female over 18 years of age;
- having had childbirth experiences in the last five years; and
- living in rural areas of Tasmania at the time of giving birth.

In contrast to the selection criteria for survey participants, the interviews focused on women who had had child birth experience within the last five years. This helped the researchers to investigate more recent issues in rural areas and better inform policy-makers about women's needs in maternity care.

Exclusion criteria

Women who were younger than 18 years of age were not included in the study because the needs in maternity care of teenage mothers would be different from the other groups of women and should be dealt with in a separate study. Moreover, the study did not include women who were pregnant at the time of conducting the study. As the research could lead to recollection of unpleasant memories about childbirth, this exclusion criterion aimed at protecting expectant mothers and unborn babies from any negative effects which might arise from the interviews.

Sample and recruitment

Interview participants were recruited through survey administration. Survey participants were asked to indicate on the returned survey form whether they were willing to be contacted for a follow-up interview. Among 210 returned questionnaires, 48 women consented to participate in the follow-up interview. However, the interviews stopped after conducting 22 interviews with women

because the data saturation had been achieved, and no new themes had emerged from the interviews.

3.4.1.6.2. Interviews with health professionals

Selection criteria

The selection criteria for the interviews were that the participants were maternity health care providers and had had experience in providing health/maternity services for rural women. Interviewing these health professionals who had provided services for rural women would reveal the available services for women and the difficulties or issues which women in rural areas might encounter.

Sample and recruitment

Participants were recruited using purposive sampling strategies including recruitment through third parties. Key managers of hospitals and health centres across Tasmania were contacted to assist in participant recruitment. Twenty-eight health professionals who met the selection criteria were invited to participate in the study. Twenty of them agreed to participate in the interviews.

3.4.1.7. The process of data collection

Interviews were carried out to investigate Research questions 1 and 2 of the study which aimed to identify women's needs and existing services. In particular, women were asked about their maternity care experiences in rural Tasmania, from antenatal care, labour and delivery and postnatal care. By exploring their experiences in maternity care, their needs and available services would be revealed. Moreover, health professionals were asked about their views and experiences in providing care for rural women in both rural communities and major hospitals in order to identify women's needs in maternity care and examine the current services. Health professionals who had worked in the health system were the best participants for the study since they were in a position to reveal available services for women. The lists of core interview questions were prepared as the guides to assist with the interview process.

For the full list of interview questions with women please see Appendix 4.

For the full list of interview questions with health professionals please see Appendix 5.

3.4.1.8. Technical process of research

3.4.1.8.1. Pretesting instrument

The interview questions and information sheet were pretested among five participants who consented to participate in the study. The participants were asked about the appropriateness of the questions, the ease of understanding the questions and comfort level with the questions. If some of the questions were considered to be too personal or sensitive, the participants were asked how these questions could be changed to be more suitable. Then changes were made accordingly. Pretesting of the interviews also helped the researcher to determine the length of the interviews.

3.4.1.8.2. Audio-recorded interviews

Before the interview began, the participants were asked for their permission to be audio-recorded. All participants in the study agreed for their interviews to be audio-recorded. A small recorder was used to record the interviews. To ensure confidentiality, the names of the participants interviewed were not used.

3.4.1.8.3. Transcription

Audio-recorded interviews were transcribed verbatim by the researcher in Microsoft Word. Verbatim transcription of audio files assisted in eliminating any type of bias and to avoid human error. Transcripts were then checked against interview playback for errors or omissions. After quality-assurance, the transcripts were imported into QSR-Nvivo version 9 for analysis.

3.4.1.9. Conducting the interviews

Information sheets and consent forms were presented to the participants prior to any interviews. The interview was only conducted after the participant had voluntarily signed a consent form. Upon the completion of their interview, participants were asked to complete a short demographics sheet. The demographic

questionnaire contained fixed response questions about age, education, background and language spoken at home. The researcher also spent some time building rapport before the interview and talking after the interview. Interviews lasted between 45 minutes and one hour and the interview guides were used during the interviews.

The interview locations were selected by the participants in order to provide them with the most comfortable atmosphere. The interviews were conducted at local health centres, coffee shops or at child health centres in the selected communities in Tasmania. Conducting interviews in public places gave both women and the researchers a degree of comfort and safety. The study was of great interest to women and they were very willing to participate in the interviews despite being busy with small children. Most health professionals chose to have the interviews conducted in their workplaces for their convenience.

3.4.1.10. Validity and reliability

3.4.1.10.1. *Validity*

Validity refers to the appropriateness, meaningfulness and usefulness of the specific inferences made, to the quality of the data derived, and the associated claims made when examining the results (McDermott & Sarvela, 1999). In qualitative research the focus on validity is more to determine whether the account provided by the researcher and the participants is accurate, can be trusted, and is credible (Creswell & Plano Clark, 2007, p. 126). Validity comes from the analysis of the researcher and from information gleaned while visiting the participants and external reviewers (Creswell & Plano Clark, 2007). Validity in qualitative research lies in the reader being convinced that the researcher has accessed and accurately represented the social world under study (Grbich, 1999b). In this study, the data collected from the interviews was analysed and coded using the actual words of the participants. A member checking approach was also used in which the findings were checked by some of the participants with whom the researcher had built a strong rapport. The data results were explained and presented using narrative and meaning approach

to ensure all the emerging themes from the data analysis were clearly explained and conveyed to the readers.

3.4.1.10.2. Reliability

Reliability refers to using research methods that provide information that is consistent, dependable and stable (McDermott & Sarvela, 1999). In qualitative research, reliability is also assessed by the reader and lies in the capacity of the researcher to present a coherent, complete and meticulously checked exploration of all aspects of the topic under investigation (Grbich, 1999a). Reliability exists where there is an indication that the studied subjects' views and meanings have been accessed (Grbich, 1999a). Moreover, reliability as consistency of meaning can be addressed by consulting with other researchers' interpretation of the data through discussion until consensus is reached (Madill, Jordan, & Shirley, 2000). A reliability check is conducted by asking a researcher to act as an independent judge (Cope, 1995).

In this study, reliability of the qualitative research was addressed in a number of ways. Firstly, the researcher was the only person who conducted the interviews with the women and health professionals. Thus, the consistency of meaning of the interview data was ensured. Secondly, another researcher (an independent judge) who was doing research in the same general field was asked to review the raw data of the interviews. The independent judge reviewed verbatim transcripts of interview files. This researcher also independently coded six interviews of a random sample of data, three from interviews with women and three with health professionals. The principal researcher and the independent judge discussed the coding until agreement was reached.

3.4.1.11. Data analysis

There are many different techniques of qualitative data analyses including content analysis, narrative analysis and grounded theory. Although different methods of qualitative data analysis can produce different theoretical perspectives in the

interpretation of data collected, most tend to share a similar analytical process. The following steps are typical for qualitative data analysis (Creswell, 1994; 2003b):

- Familiarisation with the data through repeated reading, listening, etc.;
- Transcription of interview material;
- Organisation and indexing of data for easy retrieval and identification (e.g., by hand or computerised programmes such as NVivo);
- Anonymising of sensitive data;
- Coding (may also be called indexing);
- Identification of themes;
- Development of provisional categories;
- Exploration of relationships between categories;
- Refinement of themes and categories; and
- Development of theory and incorporation of pre-existing knowledge.

Content analysis is different from thematic analysis or grounded theory on the basis that content analysis involves the identification of codes prior to searching for these in the data, and that thematic analysis involves the inductive identification of codes from the data (Rice & Ezzy, 1999b). This method is rather inadequate for this research since semi-structured interviews were conducted in order to explore new themes on women's maternity needs and existing services. Although a few codes can be identified before the data collection process, it was expected that more codes would emerge.

Narrative analysis is not appropriate for this study because this method is more suited to research on biographies, life histories or case studies. Grbich (1999b) stated that narrative analysis is distinguished from other forms of qualitative data analysis by its attention to the structure of the narrative as a whole. Narrative analysis searches for larger units of discourse and codes their structure and thematic content.

Grounded theory is the most commonly used methodology for developing theory in qualitative analysis. Theory development begins with the data contained in the grounded method. Data is coded and categorised as the researcher starts to see

patterns emerge. Theory is developed throughout the research process as data interpretation takes place and comparison of that interpretation is made with new data that is collected (Strauss & Corbin, 1990). The researcher is continuously ensuring that the evolving theory explaining why things occur is supported by evidence in the data, whenever that data is collected. The important principle is that grounded theory tries to develop and elaborate theory by constant comparison with the data gathered during the research process.

Grounded theory was most suited to the analysis of the interview data of this study. According to Glaser and Strauss (1967), theories were either deduced from logical assumptions or generated from observation. Grounded theory provided the structure often lacking in other qualitative approaches without sacrificing flexibility or rigour. The resulting theory was an explanation of categories, their properties, and the relationships among them. The results led to an evolutionary body of knowledge that was grounded in data.

The essential idea in discovering a grounded theory was to find a core category, at a high level of abstraction but grounded in data, which accounted for what was central in the data (Punch, 2005). Grounded theory analysis involved three steps. The first step was to find conceptual categories in the data, at a first level of abstraction. The second step was to look for relationships between these categories. The last step was to conceptualise and account for these relationships at a higher level of abstraction (Punch, 2005). These three steps implied three general types of codes, namely the substantive codes, theoretical codes and core code. Substantive codes were the initial conceptual categories in the data. Theoretical codes connected these categories. The core code was the higher-order conceptualisation of the theoretical coding around which the theory was built.

The coding process in this study involved the following steps (Grbich, 1999b, p. 175):

- Open coding: is a word-by-word, line-by-line analysis that occurs every time the data is collected. This process is designed to fracture the data and then group it conceptually, generalising concepts that emerge from it and fit within it.
- Axial coding: involves intensive analysis of one category that has been developed in open coding. It is used to develop connections between this category and its subcategories.
- Selective coding: is the process of validating the relationship between a core category and other categories. The core category can be identified by its centrality, frequent occurrence, good connections to other categories and implications for more general theory.

NVivo (version 8) (QRS International Pty Ltd, 2011) was used to organise and index interview data for easy retrieval and identification. NVivo allows the researcher to store, code, and retrieve transcribed interviews, researcher ideas and comments, or even photographs. The data is broken down into segments called text units that are coded according to a category system developed by the researcher after a thorough review of the data. The size of each segment may vary, but each should contain a single complete statement, idea, or thought. This category system is made up of nodes. Each node is like a container of an idea about the data. Nodes can then be placed in a hierarchical index tree that is generated by the researcher as patterns in the data emerge. In this way, categories and sub-categories can be established and placed in the tree. By moving text around into categories and sub-categories, the researcher can build an understanding of the relationships between the different elements of the data.

3.4. Ethical issues

Research which involves or impacts upon people requires ethics approval from the Human Research Ethics Committee. Human research ethics concerns the ethical principles and values which should govern research involving people. There are four basic principles in ethical research:

- Integrity of the researcher and the research to be undertaken;
- Respect for people, which means respect for their dignity and rights;

- Beneficence, which means the obligation to maximise possible benefits and minimise possible harm; and
- Justice, which means asking who ought to receive the benefits of research and bear its burden.

This study applied for and received the approval of the Human Research Ethics Committee (Tasmania) Network (see Appendix 1 for Ethics application). To protect the participants' confidentiality, recorded audio files and returned questionnaires were coded and accessible only by the chief investigator and the researcher. For the interview data, the participant was given a code, for example, participant 1, without referring to the individual's name. In addition, there was the opportunity for participants to access copies of their audio-recorded files, transcripts, reports and thesis within five months of the interviews and before publishing, to withdraw any information with which they were uncomfortable.

Although the research could lead to a recollection of unpleasant memories about childbirth, its potential benefits, including gaining insights into the needs of the participants in maternity care, improving their social wellbeing and improving access to maternity services in rural areas, justify the risks involved in the research. Counselling services were arranged in advance to deal with those potential issues. However, there were no participants who needed these services during the interview process.

During the project, data collected from interviews and the survey questionnaires was stored on a CD and kept in a securely locked cabinet. Once the study is completed, the audio data transcription and analysis, the audio CDs and transcripts will be stored in a securely locked cabinet at the University of Tasmania for a period of five years after which they will be destroyed (erased/shredded).

3.5. Conclusion

This chapter presents the conceptual framework which underlies the design of the study. The study employed mixed methods using survey questionnaires and semi-structured interviews as its data collection techniques. The data was triangulated by

collecting data from two groups of participants: mothers and health professionals. A thorough review of research methodologies was undertaken to establish the credibility of the use of semi-structured in-depth interviews and questionnaires to gather data. The reasons for the choice of these were discussed. The detailed procedure of the study has been described in detail. This chapter also has presented the process of data collection including collecting interview data and survey questionnaires. The validity and reliability of the instruments was tested. The important part of the methodology, data analysis, was discussed in detail. The study also employed two computer software programs NVivo and SPSS to assist in the process of managing and analysing data. The next two chapters, 4 and 5 will present the quantitative and qualitative findings respectively.

Chapter 4: Quantitative Data Analysis

4.1. Introduction

Quantitative analysis plays an important role in empirical research as it can provide powerful evidence in support of claims made in a study. As the term “quantitative” implies, quantitative analysis deals with numerical data and uses statistical methods and tools to obtain and interpret results. As mentioned earlier in Chapter 3, the survey was designed to respond to the research questions 1 and 2:

- RQ1: What are the maternity needs of women in rural Tasmania?
- RQ2: What are the current maternity services for rural women in Tasmania?

The chapter is divided into six sections including the introduction. Section 4.2 presents the descriptive statistics of the participants’ profiles. Section 4.3 reports their maternity care experiences including care provided to them from pregnancy to early postnatal period, the women’s choices of maternity care, experience of continuity of care, quality of maternity care and breast feeding. Section 4.4 presents their views and preferences in maternity care. Section 4.5 analyses the factors that are important to their views and experiences on maternity care. Section 4.6 is the summary and 4.7 conclusion.

4.2. Profiles of the participants

As outlined in Chapter 3, 600 sets of questionnaires were distributed to women in the six rural communities. A total of 210 questionnaires were returned and this represents a response rate of 35%. The following sub-section presents the profiles of the respondents including their age group, level of education, background, most recent child birth experience and the type of delivery they had at the most recent birth.

4.2.1. Age group

Figure 4-1 shows the age composition of the participants. Most of the participants (42.1%) were over 40 years of age. The second largest group of women is those aged between 31 and 40 accounting for 36.8%. As shown in Figure 4-1, just over 20% of the participants were aged from 22 to 30 years old. Only one per cent (1%) of the participants aged between 18 and 21. As a result of the selection criteria of the survey, some participants have had their childbirth experiences some years ago. This is a limitation in this study. However, as mentioned earlier research has shown that women's memories in childbirth are generally accurate after years (Simkin, 1991, 1992). Memories about labour, caregivers, the presence of partners, particular interventions, the birth and especially the first contact with the baby are still very clear even after 20 years (Simkin, 1991, 1992).

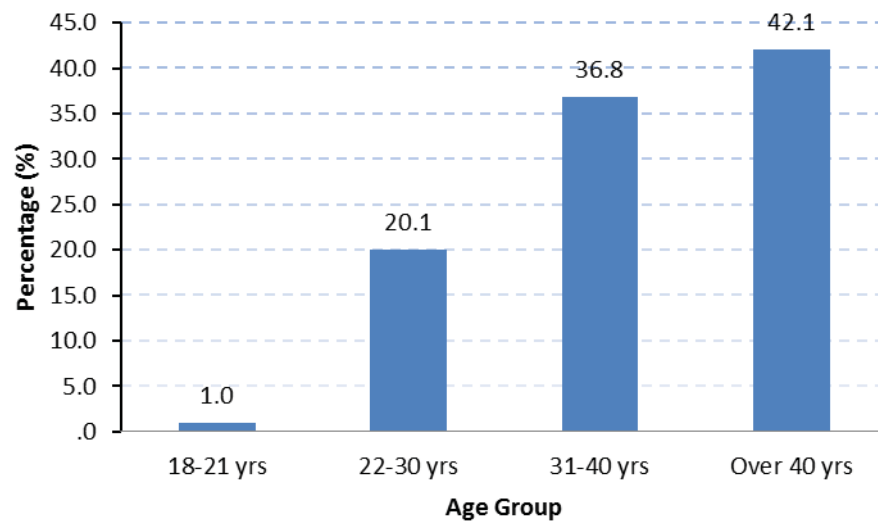


Figure 4-1: Characteristics of respondents by age group.

4.2.2. Level of education

Regarding the level of education, as shown in Figure 4-2, more than half of the women surveyed (53.1%) have completed secondary school. About one third have attended university. Nearly 14% of the women hold other tertiary qualifications and only 1% of them have not completed education beyond primary school.

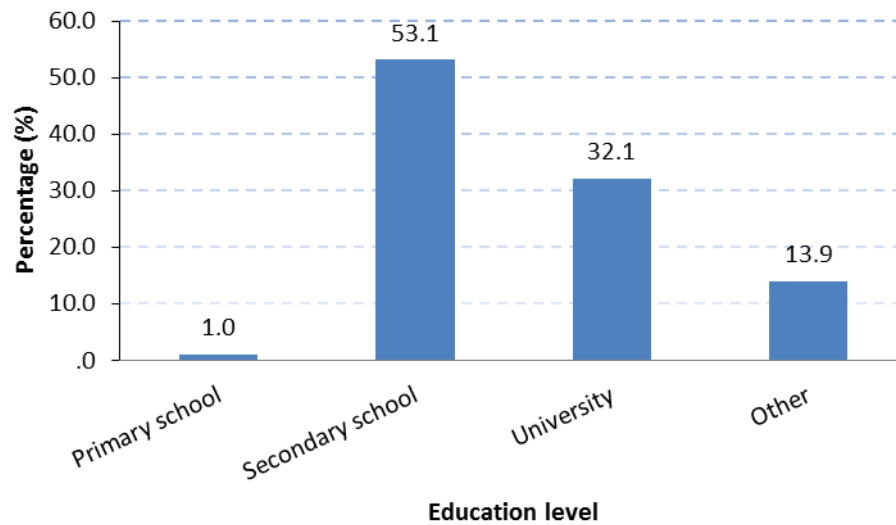


Figure 4-2: Characteristics of respondents by level of education

4.2.3. Language spoken at home

As illustrated in Figure 4-3, the majority of the women (97.1%) in the study speak English at home. Only about 3% of the participants speak other languages at home.

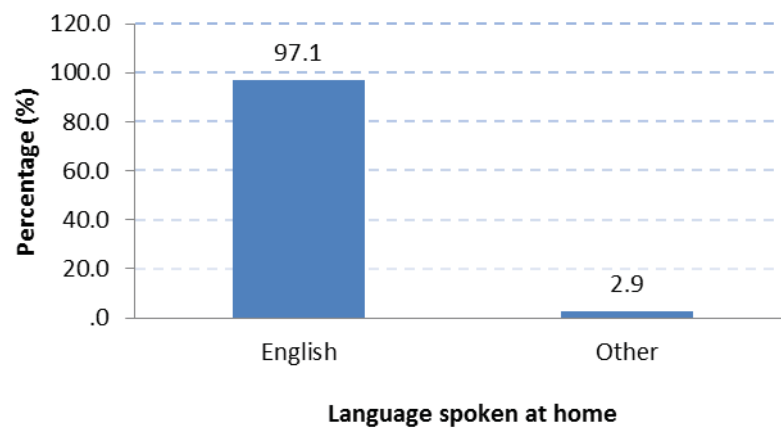


Figure 4-3: Characteristics of respondents by language spoken at home

4.2.4. Background

Regarding their background, approximately 4% of the participating women claimed that they identify themselves as Aboriginals or Torres Strait Islanders. The rest

(96.2%) said they are not aboriginals or Torres Strait Islanders. These are illustrated in Figure 4-4 below.

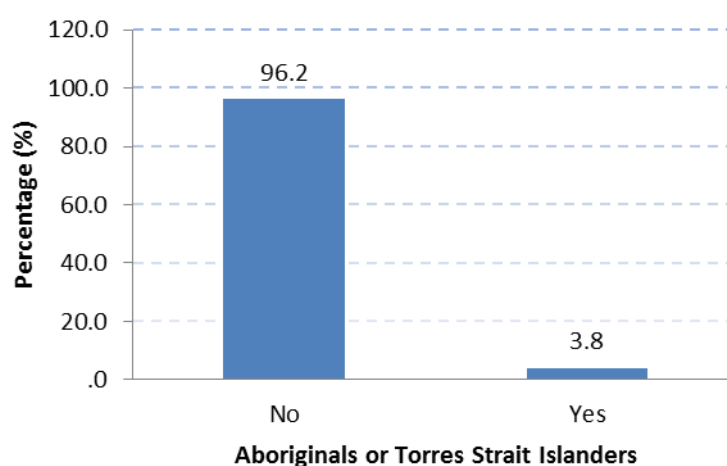


Figure 4-4: Characteristics of respondents by background

4.2.5. Most recent childbirth experience

In response to the question about their most recent childbirth, approximately 16% of the respondents indicated that they had experienced childbirth in the last 12 months. About the same percentage of participants had given birth 1 to 2 years ago. Nearly a quarter (24.5%) of them had childbirth experience 2 to 5 years ago and the rest over 5 years ago. These are illustrated in Figure 4-5.

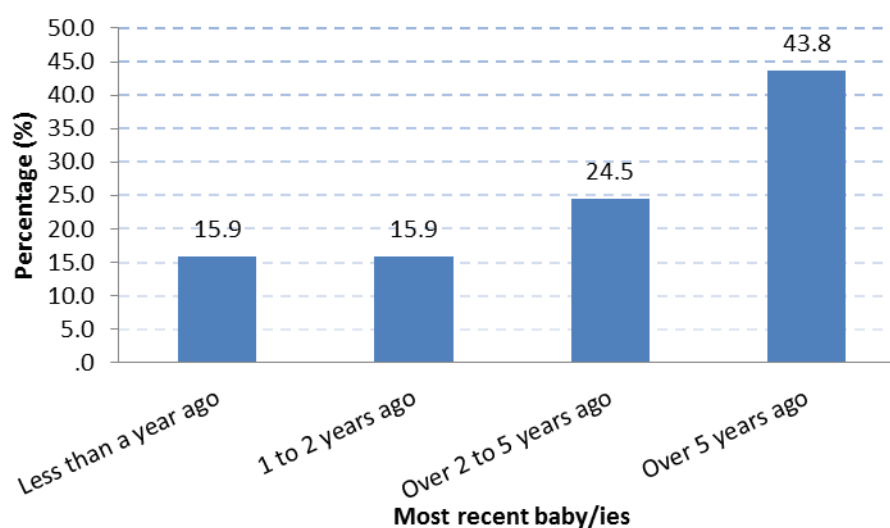


Figure 4-5: Time of childbirth experience

4.2.6. The nearest maternity services

As shown in Figure 4-6, more than half (58.4%) of the respondents lived less than an hour's drive from the nearest maternity hospital. About 37% of the women said it took 1 to 2 hours for them to drive to the nearest maternity unit from their homes. The travel time for the rest of the participants (4.3%) from their usual place to the nearest maternity health hospital was more than 2 hours by car.

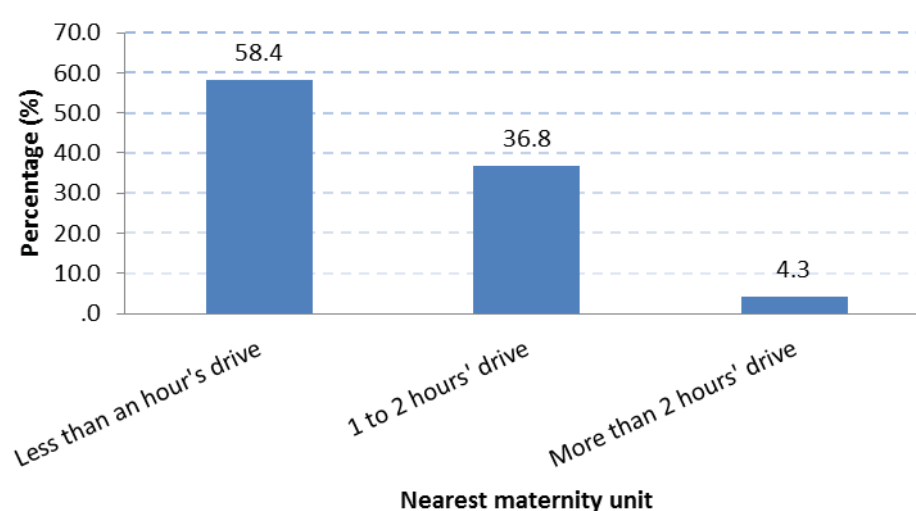


Figure 4-6: Travel time to nearest maternity unit

4.2.7. Type of delivery

Figure 4-7 illustrates that the different types of delivery by the participants in the study. Almost 63% of the women had vaginal delivery, nearly a quarter (22.9%) experienced caesarean delivery. Induced labour and mixed types of delivery accounted for 10.2% and 4.4% respectively.

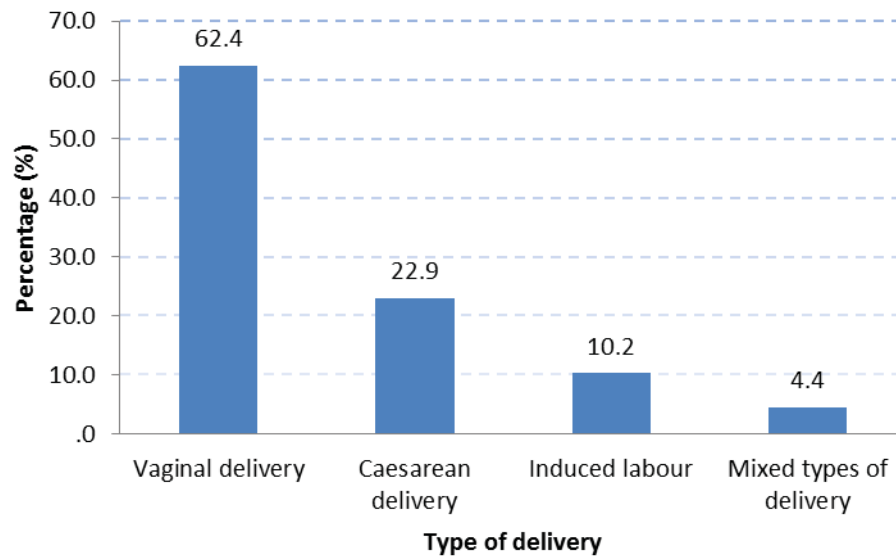


Figure 4-7: Type of delivery

4.3. Maternity care experiences

The participants were asked about their maternity care experiences including antenatal care, childbirth care and postnatal care. Their responses were analysed and coded by themes. Five themes were developed to reflect the care that country women received in Tasmania namely (i) care provided; (ii) the women's choices of maternity care; (iii) continuity of care; (iv) quality of care and (v) breastfeeding. These themes are covered in details in the sub-sections below.

4.3.1. Care provided

4.3.1.1. Antenatal care

Antenatal care is the care performed by health professionals to women after confirmation of their pregnancy. Most women have their first antenatal check-up between weeks 8 and 12 of pregnancy. They should then attend antenatal check-ups once a month until the 28th week, then twice a month until the 36th week of pregnancy. During the last 4 weeks of their pregnancy, they should see the health professionals more often, about every week.

The survey results demonstrate that the majority of the women in the study (96.1%) attended antenatal check-ups and only a small number of them (3.9%) did not use the service. These are illustrated in Figure 4-8.

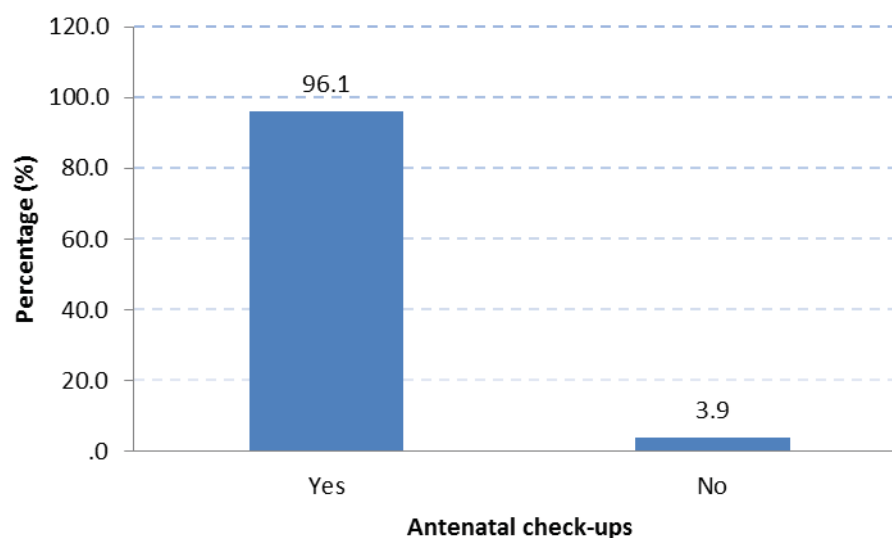


Figure 4-8: Attendance of antenatal check-ups

As shown in Figure 4-9, the women in the study went to many different places for their check-ups. More than a quarter (27.5%) of the participants went to major hospitals during their pregnancy for check-ups. Local hospitals were the place where about one quarter (24%) of the women in the study went to for their antenatal care. Specialists looked after 19% of the expectant mothers and local GPs provided care for about 15% of them. The rest of the women (15%) were given care by other health professionals such as independent midwives. Further tests will be applied to find out what factors influence their decision where to go for their antenatal check-ups. The results of these tests show that driving time from the women's normal residence to the nearest maternity unit at the time they had their babies has an effect on the place where women get their antenatal check-ups. This explains that distance to the major hospital is an important influencing factor for women when deciding to access certain services available to them.

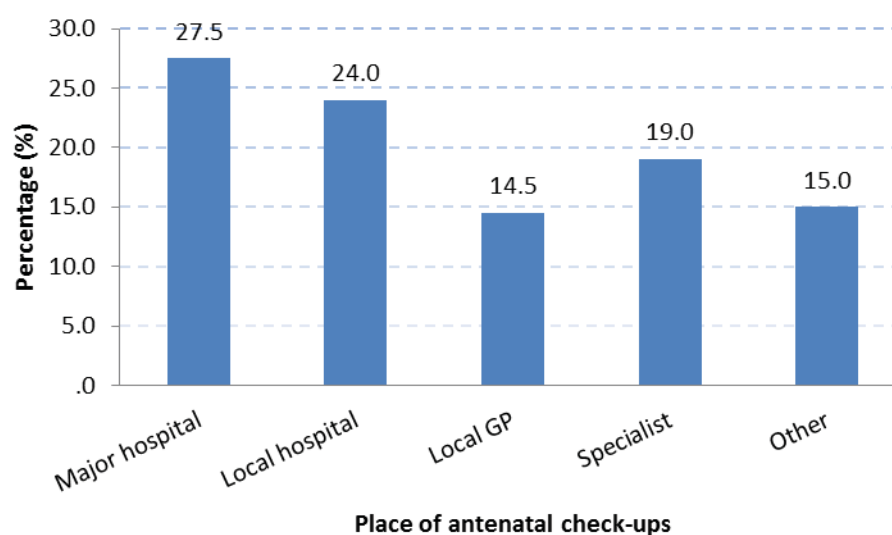


Figure 4-9: Place of antenatal check-ups

Antenatal classes, which are part of the antenatal care for expectant mothers, help women prepare physically and emotionally for the birth of their baby and to look after their newborns. Figure 4-10 demonstrates that more than half (51.2%) of the respondents attended antenatal education. The remainder stated that they did not participate in antenatal classes. Reasons why they did not attend antenatal classes will be examined in the qualitative results sections in the next chapter.

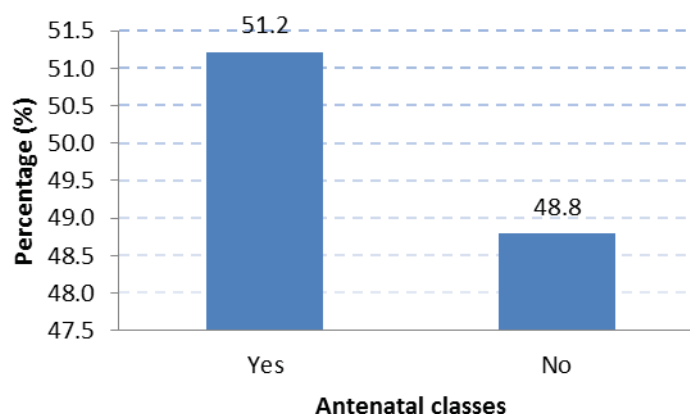


Figure 4-10: Antenatal class attendance

Figure 4-11 indicates that the majority of the women (55.7%) attended antenatal classes in major hospitals. About one third of them went to their local hospitals and 14.2% to other places such as private classes conducted by independent midwives. Only a small number (2.8%) of them got antenatal education from their local GPs.

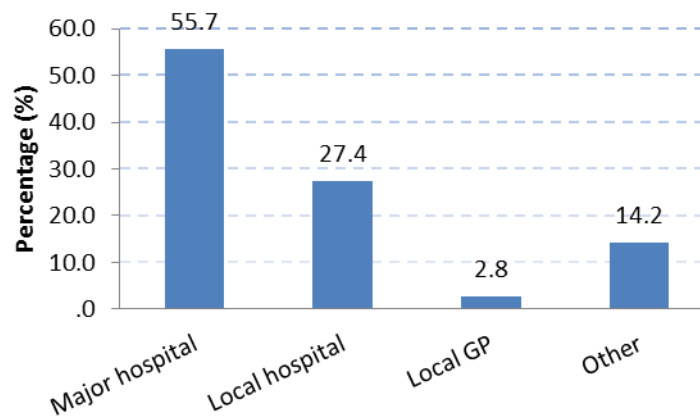


Figure 4-11: Place of antenatal classes

4.3.1.2. Labour and delivery care

Figure 4-12 shows that major hospitals were the place for 58% of the participants to give birth. Just under one third of the women had their childbirths in local hospitals. It is noticeable that 4 out of 210 (2%) had their labour and delivery at home. The rest of the women delivered somewhere else including on the road and in the car.

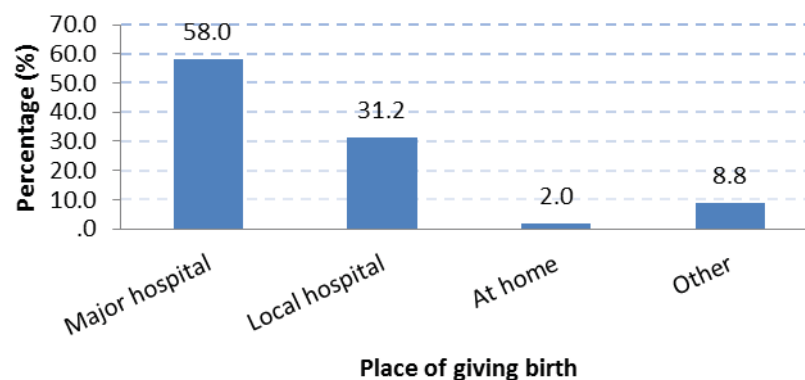


Figure 4-12: Place of giving birth

The participants were asked what health professionals provided care and support to them during labour and delivery. Figure 4-13 indicates that the majority of survey respondents (64.4%) received care during labour and delivery from a group of health professionals including doctors, midwives and nurses. Nearly a quarter (24.9%) had only midwives as their carers during labour and delivery.

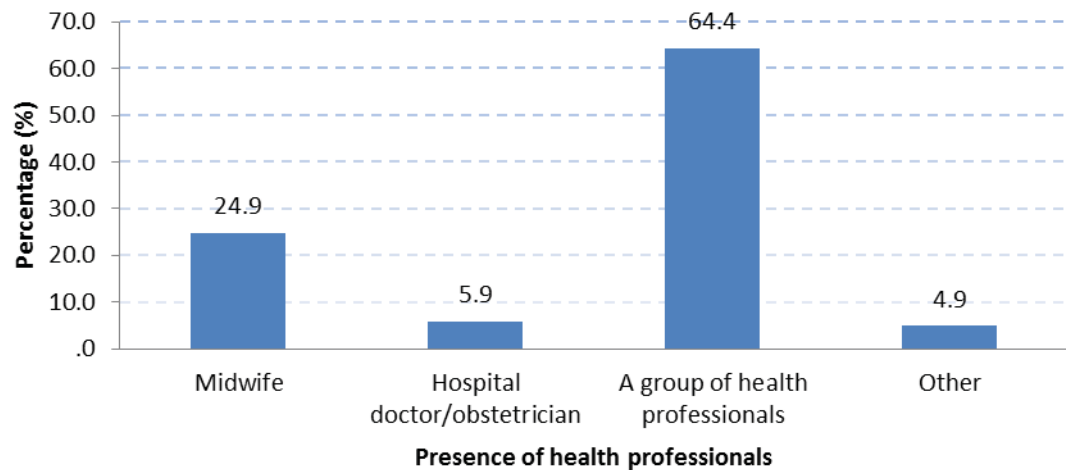


Figure 4-13: Health professionals' presence during labour/childbirth

4.3.1.3. Postnatal care

The length of hospital stay after giving birth depends on where a woman had her baby, the type of birth she experienced, the hospital policy and the health condition of the mother and the baby. Over the last few decades, there is an accelerating trend in Australia for woman after having a baby to stay in hospital for a shorter period of time. The combined overall average stay in hospital after having a vaginal or Caesarean birth in 2003 in Australia was 4 days. In 2003, 10.8% of women went home within 48 hours after giving birth, reflecting a nearly discharge program being put in place. Shorter hospital stays are intrinsically linked to public hospital budgetary constraints and a push by private health insurers to save costs for insured women staying in public and private hospitals (Postnatal length of stay in Australia, 2009).

Figure 4-14 reveals that almost half of the women in the study stayed in hospital for 3 to 5 days after birth. Just above a quarter spent longer time in hospital for 6 days or more. More than 21% of them stayed in hospital for a shorter period of time from 1 to 2 days. Less than 4% of the participants were discharged from hospital in less than a day.

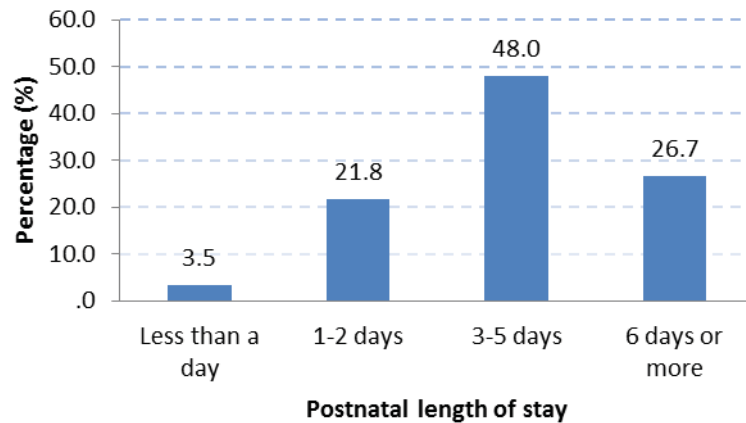


Figure 4-14: Postnatal length of stay

It is generally expected that most women would have a routine physical check-up, usually at around 6 to 8 weeks from childbirth. Figure 4-15 shows that the majority of the women in the study (88.2%) had postnatal check-ups. The rest (11.8%) said they did not go for check-ups after giving birth. The qualitative data which will be examined in the next chapter will give an insight into the reasons why some women chose not to attend postnatal check-ups.

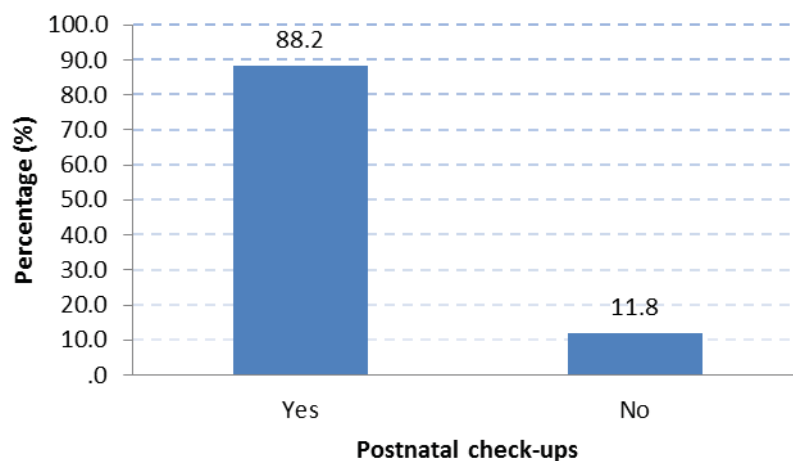


Figure 4-15: Postnatal check-up attendance

Where to go or whom to go to for their postnatal checks depends on who cared for these women during their pregnancy as well as their own personal preferences, convenience and what are available in their areas. The results from the survey indicate that local GPs were the main health professionals who performed postnatal check for the women in the study (46.4%). Approximately a quarter of the

participants chose to go to the specialists to have their check-ups after childbirth. More than 16% of them went to local hospitals for routine checks in the postnatal period and nearly 13% went to major hospitals. These results are illustrated in Figure 4-16.

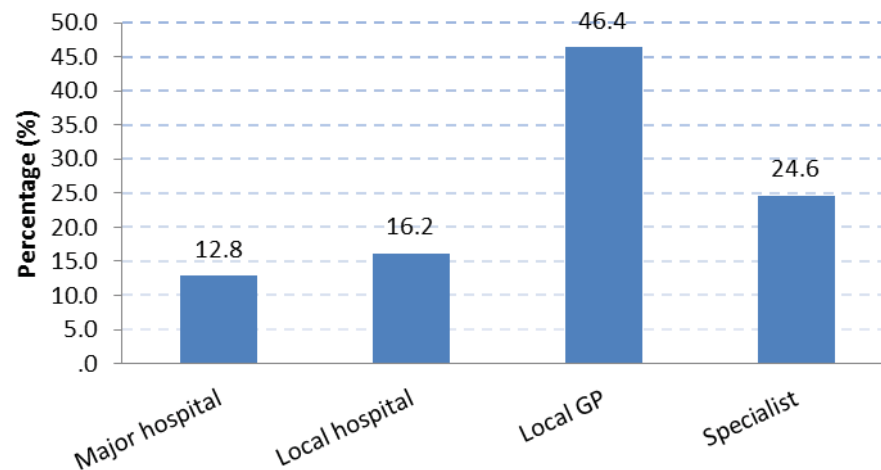


Figure 4-16: Postnatal care providers

Baby check-ups are an important part of a baby's first year of life. The purpose of the routine check-ups is to help keep the baby healthy and ensure that he or she is developing properly. At each appointment, the health provider will perform a complete physical examination, which includes measuring the baby's height, weight, and head circumference and the health provider will ask the woman about her baby's general health and development.

As shown in Figure 4-17, more than 90% of the participants brought their babies to check-ups. Less than 5% of them did not arrange any check-up for their babies. Although the number is small, it is still important to investigate the reasons why they did not use the health care service for their babies. This will be discussed in the next chapter.

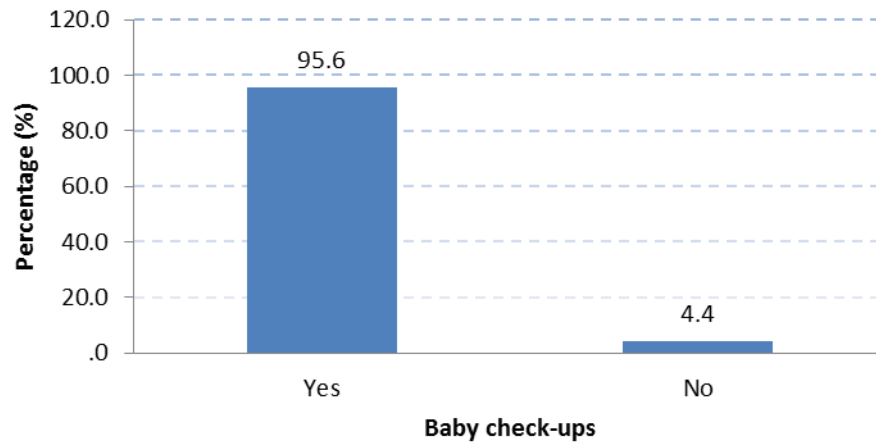


Figure 4-17: Attendance of baby check-ups

According to the results in the survey, there are various types of caregivers performing check-ups for babies. Child health centres are the main place where 64% of the participants took their baby to for check-ups. Local GPs account for one fifth of care provided. Local hospitals and major hospitals provided services to only 6.2% and 2.8% of the respondents respectively. These are illustrated in Figure 4-18.

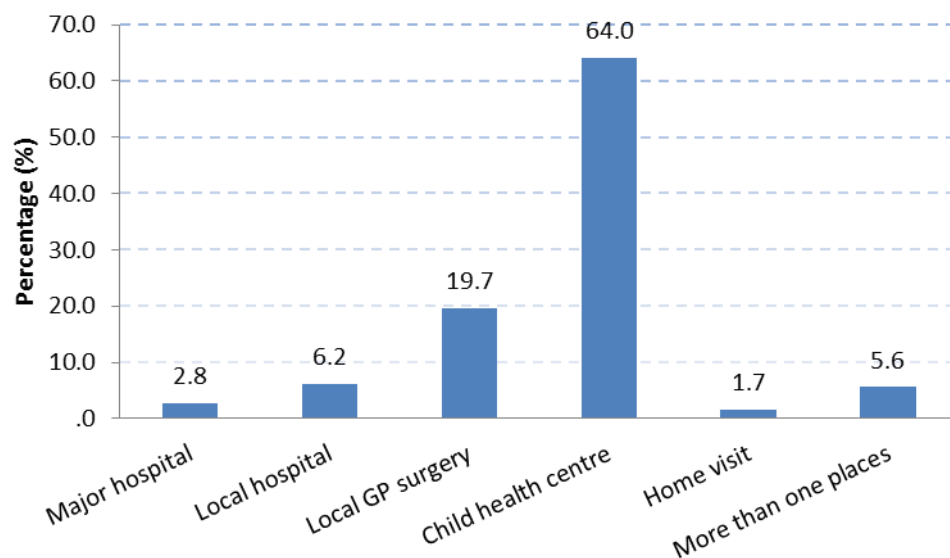


Figure 4-18: Care providers of baby check-ups

4.3.2. Women's choice in maternity care

In terms of choices in maternity care for women in rural areas, as seen in Figure 4-19, more than half of the participants in the study said they had a choice as to

where to attend antenatal check-ups. The rest (47.5%) claimed that they did not have any options in places where they could get antenatal care. Further statistical test will be applied to examine the factors that affect their choice in the next section.

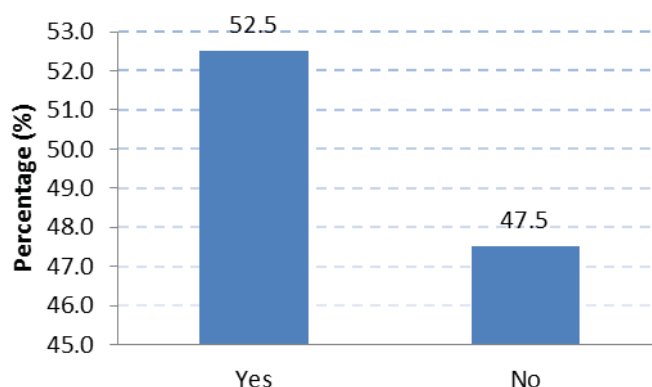


Figure 4-19: Choices of places for antenatal check-ups

Pregnant women can have a number of choices of health professionals whom they see for antenatal check-ups. However, Figure 4-20 indicates that only slightly less than half of the participants said they had a choice regarding whom they would see for antenatal check-ups. The other half were not given an option about who would provide care during their pregnancy. This issue will be covered in greater details in the next chapter.

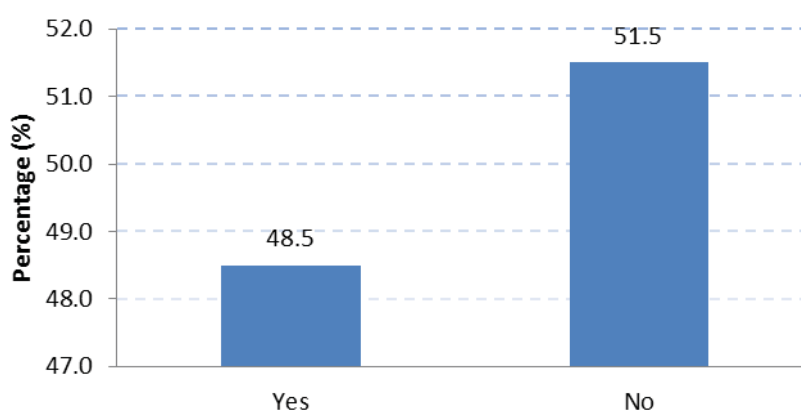


Figure 4-20: Choice of health professionals

With regard to the choice of places for delivering a baby, less than 50% of the participants said they had a choice where to give birth. More than 50% did not have an. These results are illustrated in Figure 4-21.

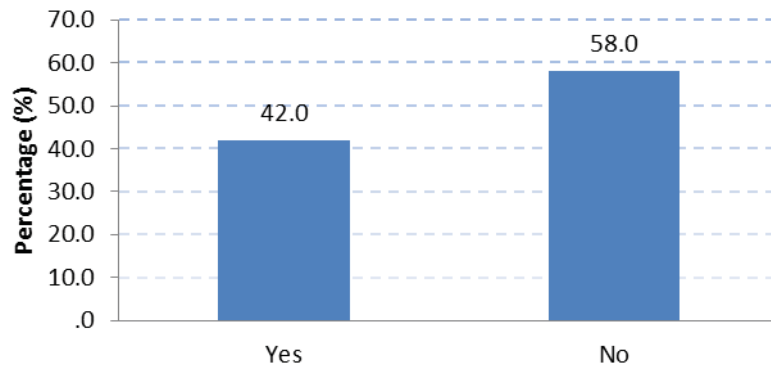


Figure 4-21: Choice of places to give birth

4.3.3. Continuity of care

Continuity of care is referred as a continuous caring relationship with an identified healthcare professional. In order to find out their experience, the participants were asked if during their pregnancy they received the most care from the same one or two health professionals or from different health professionals each time. Figure 4-22 demonstrates that about 63% of them experienced continuity of care while the rest (37.5%) were seen by different health professionals each time during their pregnancy.

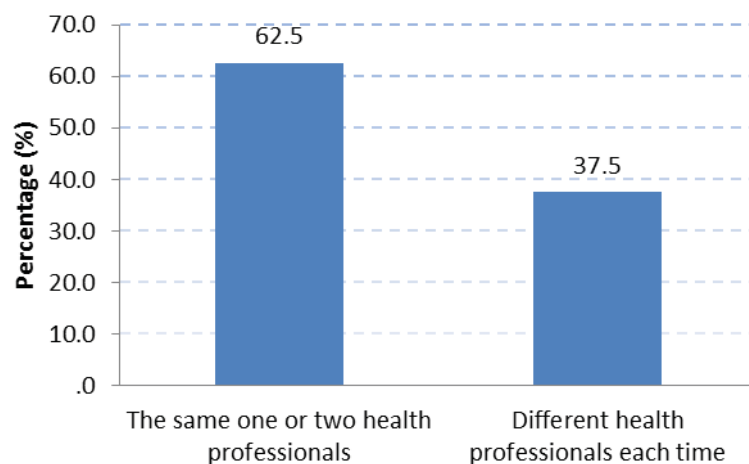


Figure 4-22: Experience of continuity of care

4.3.4. Quality of care

This section provides a picture of the quality of care that women received from antenatal period to early postnatal period. The participants were asked to rate their satisfaction of the care and services provided to them. More than 70% of the

participants were satisfied with the antenatal care that they received. Almost a quarter of them rated the care as “somewhat satisfied”. A small number of the participants (3.5%) were dissatisfied with the care. These results are illustrated in Figure 4-23.



Figure 4-23: Rating of antenatal care

For those participants who attended antenatal education, the survey asked them to evaluate the services in two aspects. The first is how well they think the antenatal classes had prepared for their childbirth. Figure 4-24 shows that just over one third of the participants think that the antenatal classes had prepared them well for childbirth. More than 50% voted the services as “reasonably well”. “Not enough” and “not at all” account for the same percentage of the women surveyed (3.8%).

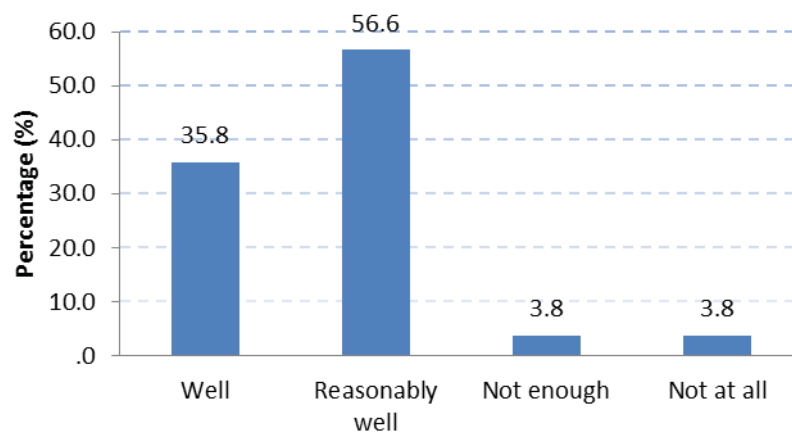


Figure 4-24: Rating of antenatal classes

The second aspect is seeking the women’s opinion on how well the antenatal classes had prepared them for looking after their babies. About a quarter of the respondents rated that they had prepared them well for doing the job of looking

after the baby. More than 40% thought they were reasonably well prepared for handling their new born. Over 20% said they were not prepared enough to cope with caring for their babies and 9.6% claimed that the classes did not prepare them at all for looking after their newborns.

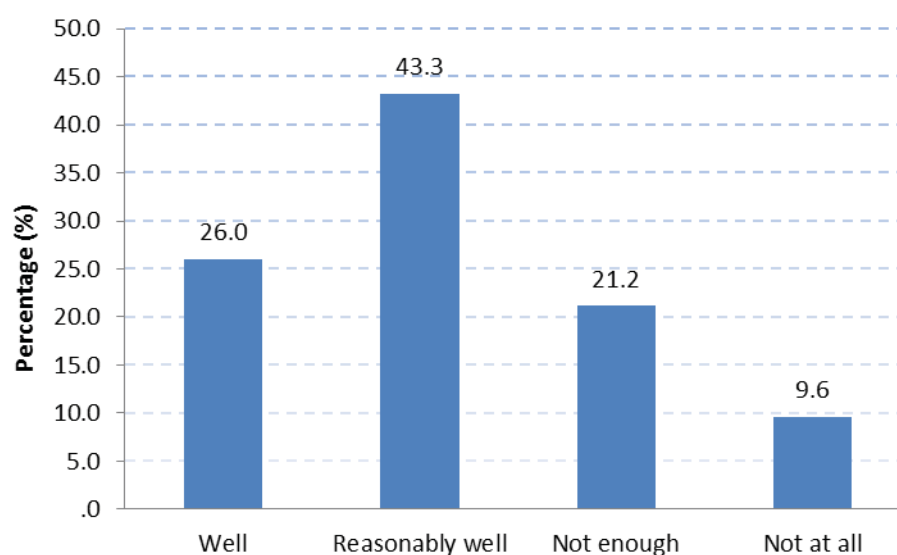


Figure 4-25: Rating on how well antenatal classes offered preparation for looking after baby

In regard to labour or childbirth care, about 74% of the women were satisfied with the care that they received. Less than 20% said they were somewhat satisfied and 7.5% were dissatisfied with the care that was provided to them during labour. These results are illustrated in Figure 4-26.

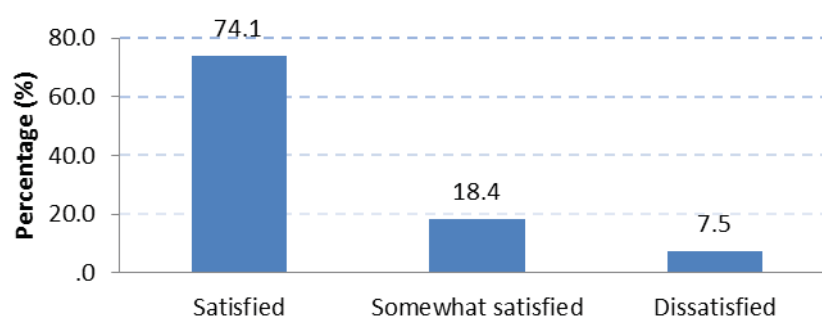


Figure 4-26: Rating of labour/childbirth care

Figure 4-27 illustrates that the majority (76.1%) of the participants were satisfied with the postnatal care that they received. "Somewhat satisfied" with the service

account for 20% of the women in the study. About 4% of them were not satisfied with the postnatal care provided.

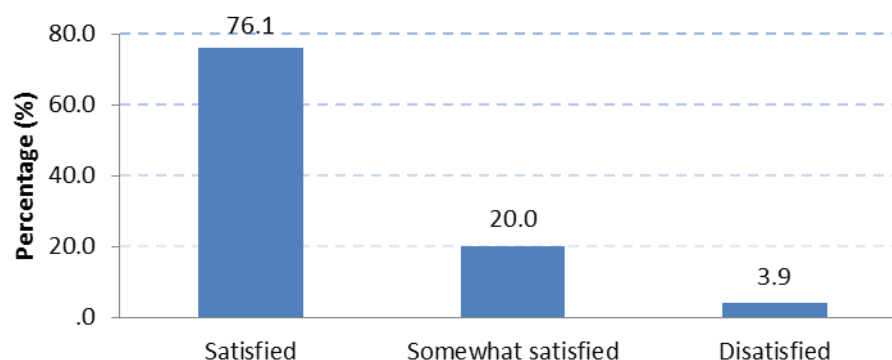


Figure 4-27: Rating of postnatal care

As analysed previously, the women in the study stayed in the hospital for different lengths of time. As shown in Figure 4-28, approximately 80% of them rated that the length of their hospital stay was “just right”. Over 10% of the participants regarded their time in hospital as too long and 9% too short.

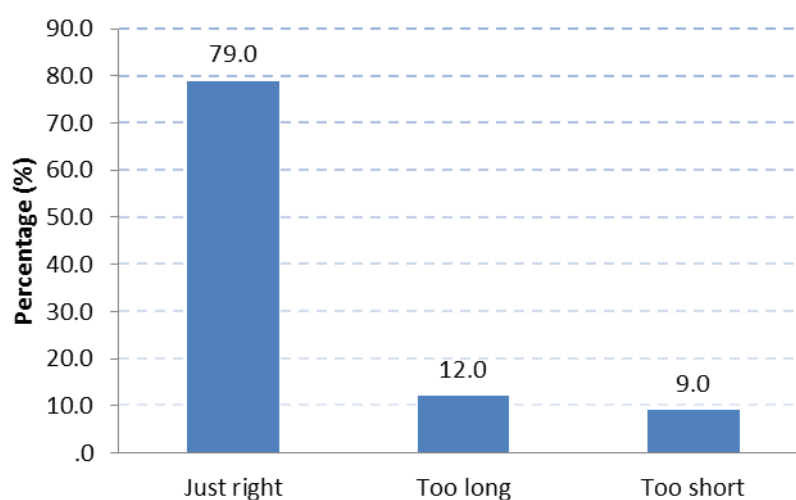


Figure 4-28: Rating of postnatal stay

4.3.5. Breastfeeding

According to the Australian Breastfeeding Association (2005) breastfeeding protects a baby from illness and infection, provides the correct food for the growing baby,

helps the development of the baby's eyesight, speech and intelligence and promotes a special loving bond between the mother and the baby. "Breast milk is an irreplaceable gift a mother can give to her baby. It is the start in life that nature intended a baby to have." (Australian Breastfeeding Association, 2005)

In order to identify the needs of women in any aspect of maternity care including breastfeeding, the survey was designed to explore women's experience in breastfeeding their baby. Figure 4-29 illustrates that the majority of the surveyed women gave their newborns their own milk. Less than 10% of the women chose not to breastfeed their babies.

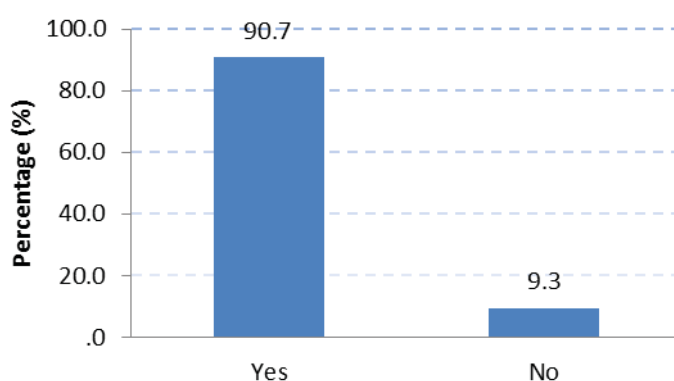


Figure 4-29: Responses on breastfeeding

The World Health Organisation (n.d.) recommends that a woman should breast feed her child for up to 2 years. The Australian Breastfeeding Association suggests that a healthy, full-term baby in the first 6 months needs only breast milk. The women in the study breastfed their babies for various lengths of time. About 20% of the respondents breastfed for 1 to 3 months; a quarter breastfed their babies for 4 to 6 months; and over 30% breastfed their babies for 7 to 12 months and 24.7% for more than 12 months. These results are illustrated in Figure 4-30.

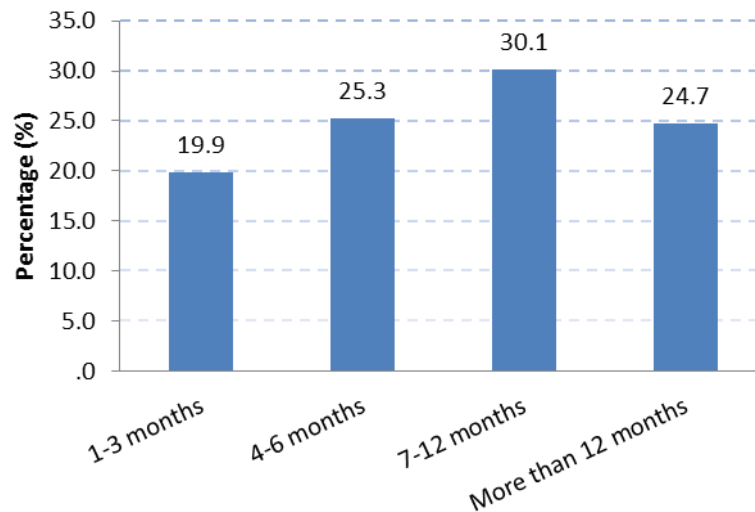


Figure 4-30: Length of breastfeeding

More than 70% of the women reported that they were given help, encouragement and advice with regard to breastfeeding by health care professionals, while 19.1% said they did not get enough support from health professionals in breastfeeding the babies. It is noticeable that only less than 4% of the participants felt that they were given privacy to feed the babies in hospitals.

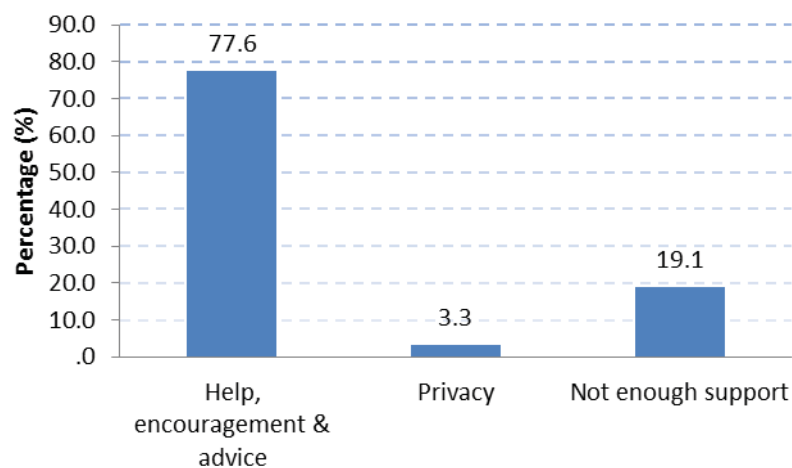


Figure 4-31: Breastfeeding support by health professionals

4.4. Views and preferences in maternity care

4.4.1. Views on travel time to safe delivery

In Figure 4-32, the responses of the women as regards travelling time for delivery varied. More than half of the respondents (59.2%) said that they would be willing to

travel for less than an hour by car to be confident of a safe delivery. About a quarter of the respondents reported that driving for one to two hours to a safe delivery place would be fine for them. About 12% said they would not be concerned about driving time. Statistical tests will be applied to investigate the factors that influence these views and are presented later in this chapter.

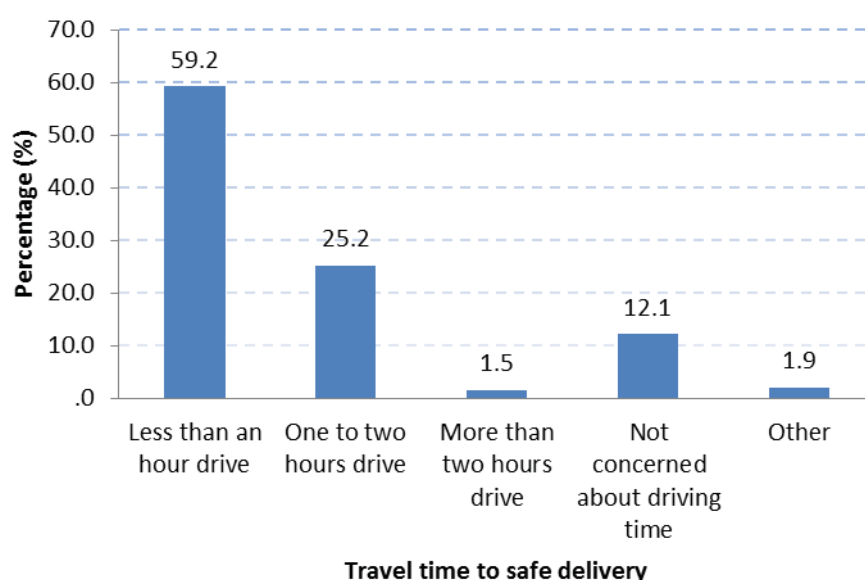


Figure 4-32: Responses on willingness to travel to safe delivery

4.4.2. Views on local maternity services

4.4.2.1. Antenatal check-ups should be provided locally?

When being asked whether antenatal check-ups should be provided locally, as demonstrated in Figure 4-33, the majority (72.3%) of the respondents strongly agreed. Another 22.8% of the respondents agreed that antenatal check-ups should be provided locally. Less than 4% of the participants were not sure about that and 1% disagreed.

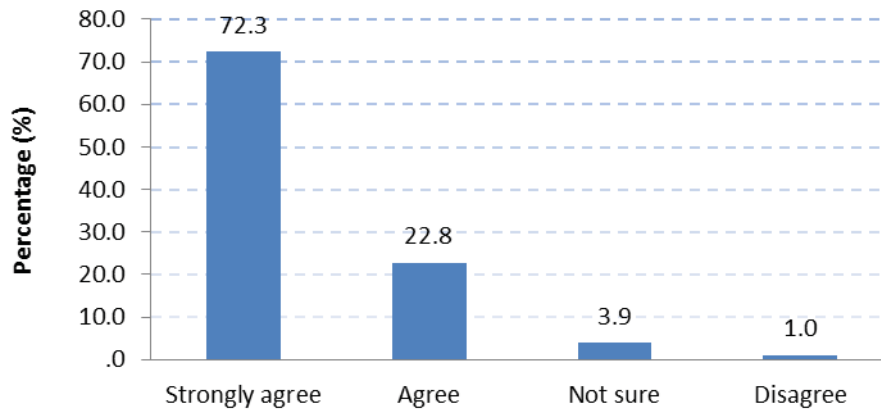


Figure 4-33: Responses on whether antenatal check-ups should be provided locally

4.4.2.2. Antenatal classes should be provided locally?

As seen in Figure 4-34, a significant number of women agreed that antenatal classes should be provided locally. Over 60% of the women voted “strongly agree” and 28.2% “agree”, indicating their views on local services. Less than 6% of the women were not sure about the subject question and 1% disagreed.

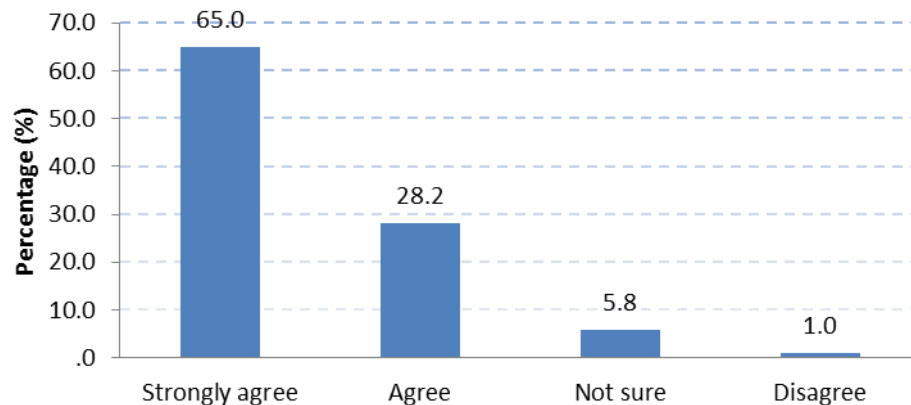


Figure 4-34: Responses on whether antenatal classes should be provided locally

4.4.2.3. Postnatal check-ups should be provided locally?

When being asked whether postnatal check-ups should be provided locally, the results of the survey, as shown in Figure 4-35, demonstrate an overwhelming support for this with 73.3% answered “strongly agree” and 24.8% answered “agree”. A small percentage (1%) were not sure and 1% disagreed.

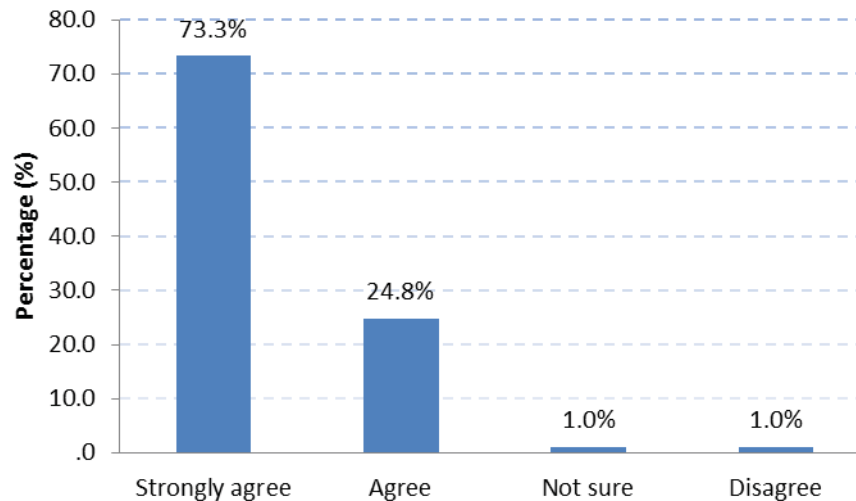


Figure 4-35: Responses on whether postnatal check-ups should be provided locally

4.4.2.4. How important is it to have a maternity unit in your local hospital?

Figure 4-36 indicates that a large number of respondents (77.6%) considered that it is very important to have a maternity care unit in their local hospitals. About 16% viewed this as “important” while only a small number (6.3%) expressed their view on this issue as “not important”. Further analysis was conducted to investigate the factors that affect the women’s view on this issue and will be presented in section 4.5.5.

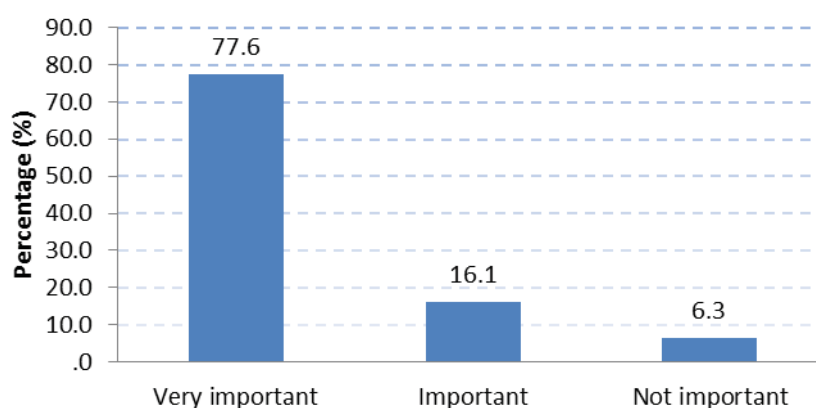


Figure 4-36: Responses on how important to have a maternity unit in the local hospital

4.4.2.5. How long a woman should stay in hospital after delivery?

Figure 4-37 indicates that the responses of the women to the question how long a woman should stay in hospital after delivery varied. A large number of participants (47.8%) said they should stay in hospital for more than 2 days after the birth of their babies. However, there was also a significant percentage (41.5%) chose the option “other”. There were many comments that the women put in as how long a woman should stay in hospital after delivery. The following quote could be regarded as representative as many respondents had similar comments: “I enjoyed a long stay as I had two kids under 4 at home. I think how long a woman should stay depends on her situation and should range from 2-7 days”. A small number of women (6.3%) supported the practice of “discharge as soon as possible” after childbirth.

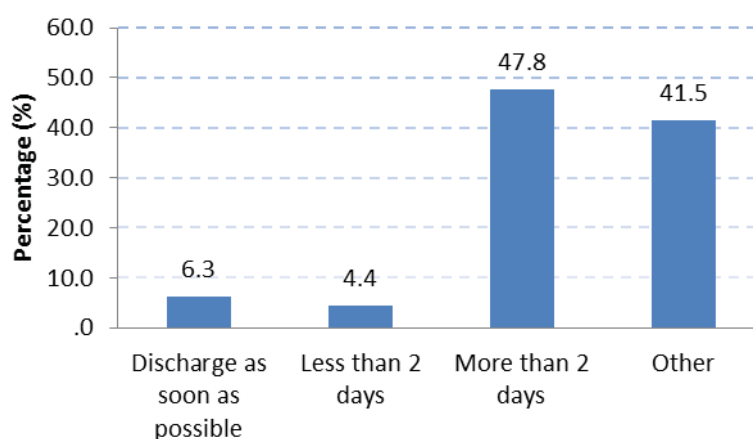


Figure 4-37: Responses on the length of postnatal stay

4.4.3. Views on continuity of care

4.4.3.1. How important is it to have one main carer?

In terms of views on continuity of care, most respondents in the survey supported the view that it is important to have one main carer who is responsible for their maternity care. Of the women surveyed, 69.4% indicated that it is very important to have continuity of care and 27.2% said it is important. A minor proportion of the women (3.4%) believed that having one main carer is not important for them. These results are illustrated in Figure 4-38.

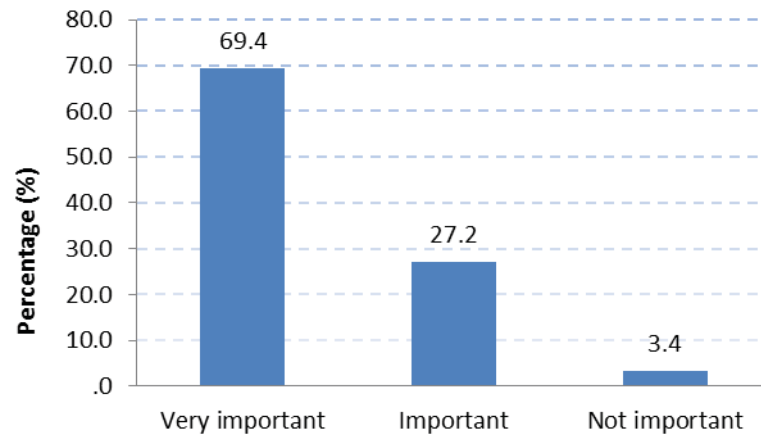


Figure 4-38: Responses on how important to have one main carer

4.4.3.2. How important is it to be cared for during labour by a midwife whom you had met during pregnancy?

As shown in Figure 4-39, more than half of the women (61.2%) thought that it is very important to be cared for during labour by a midwife whom they had met during pregnancy. Another one quarter (24.8%) said it is important. However, about 14% of them believed it is not important.

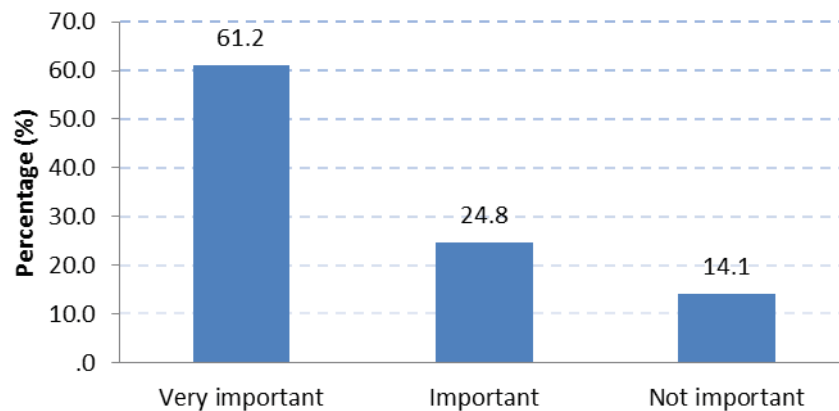


Figure 4-39: Responses on how important it is to be cared for during labour by a midwife whom you have met during pregnancy

4.4.4. Views on models of care

As indicated in Figure 4-40, the surveyed women are divided in their opinions on the preferred model of care. They were given the definitions of three models and were asked if they can choose what model of care they prefer. The first model is

conventional care which is defined as that a midwife will be involved but the overall care is under the direction of a hospital doctor. All methods of pain relief are available and it takes 2 hours to travel to the delivery unit. The second model is midwife-led care in which doctors are only involved when complications occur. There is no epidural available (if no complications) and it takes 1 hour travel to the delivery unit. The last model is planned home birth. With planned home birth, a midwife will be the main carer. The mother will be transferred to the hospital if complications occur. In case of no complication, no epidural is available and no travel is involved. The survey results demonstrate that a significant number of women (54.4%) chose conventional care as their preferred model of care. A fairly large number of respondents (36.8%) preferred midwife-led care. Approximately 9% chose to have their babies delivered at home if they could. A further statistical test will be applied to examine the factors that affect their preference on the model of maternity care and the results are presented in the next section.

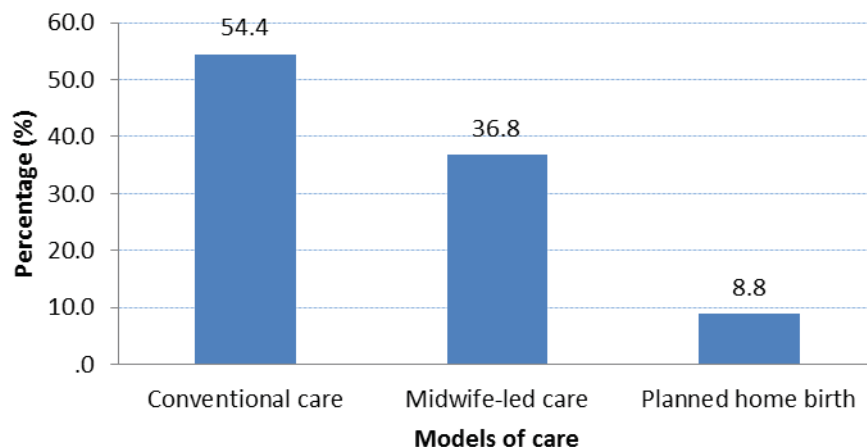


Figure 4-40: Responses on preferred model of care

4.5. Analysis of factors affecting women' experiences and preferences on maternity care

4.5.1. Chi-square test of independence

The analysis in the previous sections showed that in many instances, the surveyed women are divided in their experiences and opinions on maternity care. In particular, these include the questions on the type of delivery, the preferred model

of care, continuity of care and choice of care. The section below explores the factors or the relationship between the participants' profile and their experiences, between their profile and their views and between their experience and their view of maternity care.

As mentioned earlier, the Chi-square test of independence was used for this study. The Chi square test evaluates the dependence among variables, and can be used in the study to test if socio-demographic factors are related to the women's views and experiences on maternity care. A crucial condition of the test is that the number of cells in the contingency table with an expected number of counts of less than 5 must not be more than 20% of the total number of cells. Furthermore, if the number of cells with the expected number of counts of less than 5 exceeds 20%, the table needs to be reorganised by merging columns or rows to meet the above requirement. In the study, this could be done by, for example, merging different "somewhat satisfied" and "satisfied" to form a group of "other", merging different age groups into one larger age group, merging the "very important" and "important" answers into one group, or merging the "disagreement" and "strongly disagreement" answers into one group, and so on, depending on the context of the test. The test was conducted using SPSS version 15 generating detailed test results including the Chi-square value (χ^2), degree of freedom (df) and p-value.

4.5.2. Factors that affect women's preference on model of care

4.5.2.1. Type of delivery

As shown in Table 4-1, the analysis indicates that there is a significant association between the participants' type of delivery and the preferred model of care ($\chi^2 = 13.25$, $df = 2$, $p\text{-value} = 0.0013 < 0.05$). The women who had vaginal delivery (61.5%) are more likely to prefer to be cared for by midwives (34%). Those who had caesarean delivery (23.5%) tend to choose conventional care as the preferred model of care (17.5%). Those respondents who had induced labour and mixed types of delivery (15%) are also more likely to opt for the conventional care model (9.5%).

Table 4-1: Chi-square test of the relationship between type of delivery and preference on model of care

Type of delivery		Model of care		Total
		Conventional care	Midwife-led care and planned home birth	
Vaginal delivery	Count	55	68	123
	% of Total	27.5	34	61.5
Caesarean delivery	Count	35	12	47
	% of Total	17.5	6	23.5
Induced labour and mixed types of delivery	Count	19	11	30
	% of Total	9.5	5.5	15
Total	Count	109	91	200
	% of Total	54.50%	46%	100.0%

Chi-Square value (χ^2) = 13.25, df = 2, p-value = 0.0013 < 0.05

4.5.2.2. Type of health professionals who provided care during pregnancy

Table 4-2 shows the value of the Chi-square test of the relationship between the experience of having different health professionals during pregnancy and the preferred model of care. The Pearson Chi-square value of 14.54 with a p-value of 0.0023 suggests, at the 5% significance level, the experience of having different care providers does affect their preference on the model of care. In particular the participants who had midwives as their carer (20.1%) during pregnancy are more likely to prefer midwife-led care and planned home birth (14.4%). Those who got services from a combination of health professionals (43.3%) tend to prefer the conventional care (26.3%). Conventional care is also the model preferred by women who had an obstetrician (22.7%) and a GP (13.9%) as their carer during pregnancy.

Table 4-2: Chi-square test of the relationship between the type of health professionals providing care during pregnancy and preference on model of care

Who provided care during your pregnancy		Model of care		Total
		Conventional care	Midwife-led care and planned home birth	
Midwives	Count	11	28	39
	% of Total	5.7	14.4	20.1
GP	Count	14	13	27
	% of Total	7.2	6.7	13.9
Obstetrician	Count	29	15	44
	% of Total	14.9	7.7	22.7
A combination of midwives and GP/obstetrician	Count	51	33	84
	% of Total	26.3	17	43.3
Total	Count	105	89	194
	% of Total	54.10%	45.90%	100.00%

Chi-Square (χ^2) = 14.54, df = 3, p-value = 0.0023 < 0.05

4.5.3. Factors that affect women's satisfaction with care

4.5.3.1. Continuity of care

As shown in Table 4-3, the p-value of 0.0025 indicates that the experience of having continuity of care during pregnancy does affect how the women feel about the antenatal care that they received. The women who had the same one or two health professionals (62.5%) are more likely to be satisfied with the care they received (50.5%). The participants who were seen by different health professionals each time during their pregnancy (37.5%) tend to be somewhat satisfied or less satisfied with the care (14.5%).

Table 4-3: Chi-square test of the relationship between continuity of care and level of satisfaction with antenatal care

During pregnancy you received most care from		Satisfaction with antenatal care		Total
		Satisfied	Somewhat satisfied and dissatisfied	
The same one or two health professionals	Count	101	24	125
	% of Total	50.5	12	62.5
Different health professionals each time	Count	46	29	75
	% of Total	23	14.5	37.5
Total	Count	147	53	200
	% of Total	73.50%	26.50%	100.00%

Chi-Square (χ^2) = 9.12, df = 1, p-value = 0.0025 < 0.05

4.5.3.2. Choice of health professionals

Table 4-4 presents the result of the Chi-square test with a p-value of 0.0019 < 0.05 shows an association between the women's choice regarding whom they could see for antenatal check-ups and their satisfaction with the antenatal care that they received. In particular, women who had a choice of health professionals (48.5%) are more likely to be satisfied (40.5%) with the care they were given. The participants (51.5%) who did not have health care providers of their choice tend to be somewhat satisfied or less satisfied (18.5%) with the care provided to them. Thus, women's satisfaction in antenatal care depends on whether they have a choice as to who will look after them during their pregnancy.

Table 4-4: Chi-square test of the relationship between choice of health professionals and level of satisfaction with antenatal care

Choice of health professionals		Level of satisfaction with antenatal care		Total
		Satisfied	Somewhat satisfied and dissatisfied	
Yes	Count	81	16	97
	% of Total	40.5	8	48.5
No	Count	66	37	103
	% of Total	33	18.5	51.5
Total	Count	147	53	200
	% of Total	73.50%	26.50%	100.00%

Chi-Square ($\chi^2 = 9.68$), df = 1, p-value = 0.0019 < 0.05

4.5.4. Factor affecting women's view on continuity of care

Table 4-5 shows the data and the p-value of the Chi-square test on the relationship between “experience of having continuity of care” and “views on the importance of continuity of care”. The p-value of less than 1% suggests that there is a relationship between them. Those women (62.8%) who were cared for by the same one or two health professionals are more likely to think that it is very important to have one main carer (47.4%). In other words, the experience of having continuity of care can be an important factor in influencing the woman's views on the importance of continuity of care.

Table 4-5: Chi-square test of the relationship between experience of continuity of care and view on continuity of care

During pregnancy you received most care from		How important is it to have one main carer?		Total
		Very important	Other	
The same one or two health professionals	Count	93	30	123
	% of Total	47.4	15.3	62.8
Different health professionals each time	Count	40	33	73
	% of Total	20.4	16.8	37.2
Total	Count	133	63	196
	% of Total	67.90%	32.10%	100.00%

Chi-Square (χ^2) =9.1,df = 1, p-value = 0.0026<0.05

4.5.5. Factor affecting women's choice of care

The statistical analysis demonstrates that there is a relationship between “level of education” and the “women's choice regarding whom women could see for antenatal check-ups” (χ^2 =7.09, df = 1, p-value = 0.0077 <0.05). In particular, those women who have had tertiary education (46%) are more likely to say that they had a choice of health professionals (27%). The participants who completed up to secondary school (54%) tend to claim that they had no option given to them regarding whom they could see for antenatal check-ups (32.5%). These results are illustrated in Table 4-6.

Table 4-6: Chi-square test of the relationship between level of education completed and choice of health professionals for antenatal check-ups

Level of education completed		Choice of health professionals for antenatal check-ups?		Total
		Yes	No	
Primary and secondary school	Count	43	65	108
	% of Total	21.5	32.5	54
Tertiary education	Count	54	38	92
	% of Total	27	19	46
Total	Count	97	103	200
	% of Total	48.50%	51.50%	100.00%

Chi-Square (χ^2) = 7.09, df = 1, p-value = 0.0077 < 0.05

4.5.6. Factor affecting women's views on travel time to safe delivery

4.5.6.1. Travel time to the nearest maternity unit

As indicated in Table 4-7, the Chi-Square test with a p-value of 0.000 < 0.005 shows a relationship between the respondents' travel time to nearest maternity unit and their willingness to travel to be confident of safe delivery. Women who lived within an hour's drive (57.6%) from a maternity unit are more likely to be willing to drive for less than an hour (42.9%) to the hospital which provides safe care for them. Those respondents (42.4%) whose nearest maternity unit was more than an hour's drive are more likely to accept longer travel time than the first group of women (18%). Thus, the length of travel the women experienced in the past seems to have an important effect on their views on the issue of travelling.

Table 4-7: Chi-square test of the relationship between the nearest maternity unit and view on willingness to travel to safe delivery

Your nearest maternity unit		View on willingness to travel to be confident of safe delivery			Total
		Less than an hour drive	More than one hour's drive	Not concerned about driving time & other	
Less than an hour's drive	Count	88	17	13	118
	% of Total	42.9	8.3	6.3	57.6
More than 1 hour's drive	Count	34	37	16	87
	% of Total	16.6	18	7.8	42.4
Total	Count	122	54	29	205
	% of Total	59.50%	26.30%	14.10%	100.00%

Chi-Square (χ^2) = 27.56, df = 2, p-value = 0.00 < 0.05

4.5.6.2. Relationship between the nearest maternity unit and place of care

Tables 4-8, 4-9, 4-10 represent the results of the Chi-square tests of the relationship between the women's nearest maternity unit at the time they had their most recent babies and the place of antenatal check-ups, place of antenatal classes, place of giving birth respectively. The p-values in these tests suggest that there is an association between the nearest maternity unit and place of antenatal check-ups, antenatal classes and place of giving birth. For instance, women whose nearest maternity unit was about 1 to 2 hours' drive away are more likely to have antenatal check-ups at major hospitals. Those who lived more than an hours' drive from a maternity unit tend to get antenatal care from the major hospital. Those respondents who were less than an hour away from a maternity unit tend to attend antenatal classes at their local hospitals.

Table 4-8: Chi-square test of the relationship between respondent's nearest maternity unit and place of antenatal check-ups

Your nearest maternity unit		Place of antenatal check-ups					Total
		Major hospital	Local hospital	Local GP	Specialist	Other	
Less than an hour's drive	Count	26	44	15	22	10	117
	% of Total	13	22	7.5	11	5	58.5
More than an hour's drive	Count	29	4	14	16	20	83
	% of Total	14.5	2	7	8	10	41.5
Total	Count	55	48	29	38	30	200
	% of Total	27.50%	24.00%	14.50%	19.00%	15.00%	100.00%

Chi-Square (χ^2) = 32.99, df = 4, p-value = 0.00 < 0.05

Table 4-9: Chi-square test of the relationship between respondent's nearest maternity unit and place of antenatal classes

Your nearest maternity unit		Place of antenatal classes			Total
		Major hospital	Local hospital	Local GP and other	
Less than an hour's drive	Count	34	28	2	75
	% of Total	32.10%	26.40%	12.30%	70.80%
More than an hour's drive	Count	25	1	5	31
	% of Total	23.60%	0.90%	4.70%	29.20%
Total	Count	59	29	18	106
	% of Total	55.70%	27.40%	17.00%	100.00%

χ^2 = 14.26, df = 2, p-value = 0.0008 < 0.05

Table 4-10: Chi-square test of the relationship between respondent's nearest maternity unit and place of giving birth

Your nearest maternity unit		Place of giving birth			Total
		Major hospital	Local hospital	At home and other	
Less than an hour's drive	Count	54	56	9	119
	% of Total	26.3	27.3	4.4	58
More than an hour's drive	Count	65	8	13	86
	% of Total	31.7	3.9	6.3	42
Total	Count	119	64	4	9
	% of Total	58.00%	31.20%	10.70%	100%

Chi-Square value (χ^2) = 33.29, df = 2, p-value = 0.00 < 0.05

4.5.7. Relationship between the nearest maternity unit and women's views on importance of having a maternity unit in local area

As shown in Table 4-11, the p-value of 0.000 indicates, at the 5% significance level, that there is a relationship between the respondent's nearest maternity unit and her view on how important it is to have a maternity unit in her local area. It seems that the farther away they live from the nearest maternity units, the more they appreciate the availability of maternity services in their local areas.

Table 4-11: Chi-square test of the relationship between respondent's nearest maternity unit and the importance of having a maternity unit in her local area

Your nearest maternity unit		Importance of having a maternity unit in local area			Total
		Very important	Important	Not important	
Less than an hour's drive	Count	103	14	1	118
	% of Total	50.50%	6.90%	0.50%	57.80%
More than an hour's drive	Count	56	18	12	86
	% of Total	27.50%	8.80%	5.90%	42.20%
Total	Count	159	32	13	204
	% of Total	77.90%	15.70%	6.40%	100.00%

Chi-Square (χ^2) = 19.15, df = 2, p-value = 0.0001 < 0.05

4.5.8. Relationship between length of time since last childbirth experience and the results of the survey

For the purpose of comparing the experiences of women who gave birth recently and of those some years ago, the data for the question about the length of time since their last childbirth experiences was re-organised into two groups. The first group consists of women who have had childbirth experiences within the last five years and the second group more than five years ago. The assumption for this is that the childbirth experiences between these two groups might be different due to closure of local maternity services. Chi-Square tests have been performed for all the results of the survey by the length of time since last childbirth experience. The sections below report the results of these tests in details.

4.5.8.1. The nearest maternity unit

As illustrated in Table 4-12, the Chi-square test results show that there is a relationship between the respondent's length of time since last childbirth experience and the drive time from her residence to the nearest maternity unit. Particularly, those women who gave birth in the last 5 years (56.5%) were more likely to travel for more than 1 hour (38.3%) to the nearest maternity units. The women whose childbirth experience had been more than 5 years ago (43.5%) were less likely to travel that far (8.6%). These results reflect the fact that small local maternity units across Australia have been closed in the last two decades and consequently rural women have to travel a long way to access obstetric care which is no longer available in their local communities.

Table 4-12: Chi-square test of the relationship between respondent's length of time since last childbirth experience and the nearest maternity unit at that time

Length of time since last childbirth experience		Your nearest maternity unit		Total
		Less than an hour's drive	More than an hour's drive	
Within the last 5 years	Count	38	80	118
	% of Total	18.20%	38.30%	56.50%
Over 5 years ago	Count	13	18	91
	% of Total	34.90%	8.60%	43.50%
Total	Count	111	98	209
	% of Total	53.10%	46.90%	100.00%

Chi-Square (χ^2) = 47.57, df = 1, p-value = 0.00 < 0.05

4.5.8.2. Type of caregivers during pregnancy

The Chi-square test with the p value of 0.003 (<0.05) demonstrates that at the 5% significant level, the respondent's length of time since last childbirth experience correlates with her experience with the types of health professionals providing care during her pregnancy (see Table 4-13). For instance, more of the women who gave birth in the last 5 years had a combination of midwives and GP/obstetrician (28.5%) as their health professionals during their pregnancy. Whereas, fewer of those who gave birth more than 5 years ago experienced different caregivers (15.5%) during their pregnancy. These results again might reflect the loss of local maternity services. As a consequence, pregnant women have to travel to major hospitals to access care and thus experience different caregivers.

Table 4-13: Chi-square test of the relationship between respondent's length of time since last childbirth experience and type of caregivers during pregnancy

Length of time since last childbirth experience		Who provided care during your pregnancy?				Total
		Midwives	GP	An obstetrician	A combination of midwives& GP/obstetrician	
Within the last 5 years	Count	29	9	21	57	116
	% of Total	14.5%	4.5%	10.5%	28.5%	58.0%
Over 5 years ago	Count	11	18	24	31	84
	% of Total	5.5%	9.0%	12.0%	15.5%	42.0%
Total	Count	40	27	45	88	200
	% of Total	20.0%	13.5%	22.5%	44.0%	100.0%

Chi-Square (χ^2) = 14.226, df = 3, p-value = 0.003 < 0.05

4.5.8.3. Experience of continuity of care

The statistical analysis suggests that there is an association between the women's length of time since last childbirth experience and their experience of continuity of care. In particular, more of those women who had childbirth experience in the last 5 years had different health professionals each time during their antenatal care. This happened less to those who gave birth more than 5 years ago. These results are consistent with the previous results regarding the types of health professionals and therefore reflect the same fact that women who gave birth more recently were given care in the bigger hospitals where they experienced different health professionals each time. These results are shown in Table 4-14.

Table 4-14: Chi-square test of the relationship between respondent's length of time since last childbirth experience and experience of continuity of care

Length of time since last childbirth experience		During pregnancy you received most care from		Total
		The same one or two health professionals	Different health professionals each time	
Within the last 5 years	Count	59	57	116
	% of Total	29.5%	28.5%	58.0%
Over 5 years ago	Count	66	18	84
	% of Total	33.0%	9.0%	42.0%
Total	Count	125	75	200
	% of Total	62.5%	37.5%	100.0%

Chi-Square (χ^2) = 15.961, df = 1, p-value = 0.000 < 0.05

4.5.8.4. Rating of the antenatal care

As demonstrated in Table 4-15, the p value of the Chi-square statistic of 0.0009 indicates that length of time since last childbirth experience does affect how the respondents rate the quality of antenatal care they received. It is noticeable from the results that the longer the length of time since last childbirth experience, the more they were satisfied with the antenatal care. In other words, the women who gave birth more than 5 years ago seemed to be more satisfied with the antenatal care than those who gave birth more recently. There are many possibilities to explain these results. Firstly, losing local maternity health care could be an attributing factor for the women's dissatisfaction with care. Secondly, when women have to travel to access care, they often face many difficulties such as financial burden, lack of transport, social disruption and inconvenience. These could be factors that made the women unhappy with their antenatal care. Finally, as noted earlier, these women had poorer continuity of care and this could affect their satisfaction with care.

Table 4-15: Chi-square test of the relationship between respondent's length of time since last childbirth experience and the nearest maternity unit at that time

Length of time since last childbirth experience		How satisfied were you with the antenatal care you received		Total
		Satisfied	Somewhat satisfied and dissatisfied	
Within the last 5 years	Count	75	41	116
	% of Total	37.50%	20.50%	58.00%
Over 5 years ago	Count	72	12	84
	% of Total	36.00%	6.00%	42.00%
Total	Count	147	53	200
	% of Total	73.50%	26.50%	100.00%

Chi-Square (χ^2) = 11.09, df = 1, p-value = 0.0009 < 0.05

4.5.8.5. Rating of antenatal classes

Table 4-16 indicates that another significant difference between the two groups of women who had childbirth experience within 5 years and more than 5 years ago lies in their evaluation of the quality of antenatal classes. One might expect that education and services would improve over time. However it might not be true in rural settings such as the areas covered in this study. Previously, the results showed that women who gave birth more recently were less likely to be satisfied with the antenatal care they received. In terms of antenatal classes, these women were also less likely to think that these classes had prepared them well for looking after their babies. Whereas, the other group of women were more likely to think they had been prepared well for taking care of their newborns. These differences in opinion between the two groups might be due to the closer relationship between the women and their health professionals in the local hospitals. These women might have more chance to ask questions if they have any concerns and see the health professionals more often. These might be difficult in the bigger hospitals with busy staff.

Table 4-16: Chi-square test of the relationship between respondent's length of time since last childbirth experience and respondent's rating of antenatal classes

Length of time since last childbirth experience		How well did you think the antenatal classes had prepared you for looking after your baby?			Total
		Well	Reasonably well	Not enough and not at all	
Within the last 5 years	Count	9	30	24	63
	% of Total	8.70%	28.80%	23.10%	60.60%
Over 5 years ago	Count	18	15	8	41
	% of Total	17.30%	14.40%	7.70%	39.40%
Total	Count	27	45	22	104
	% of Total	26.00%	43.30%	21.20%	100.00%

Chi-Square (χ^2) = 11.88, df = 2, p-value = 0.0026 < 0.05

4.5.8.6. Rating of care during labour and delivery

Table 4-17 illustrates that there is a relationship between the respondents' length of time since last childbirth experience and their rating of care received during labour and delivery. For instance, the women in the first group (55.7%) who gave birth more recently were more likely to be dissatisfied (6.5%) and less likely to be satisfied (34.8%) with the care they received in labour. Whereas the other group (44.3%) were more likely to be satisfied (39.3%) and less likely to be dissatisfied (1%) with the care they were given during labour. These results once again may reflect the unavailability of maternity services in rural areas in the recent time. The qualitative results to be discussed in a later chapter will reveal that those women who gave birth more recently often talked about the impersonal care and inconsistent advice they received from different health professionals in bigger hospitals. The women's dissatisfaction with the care they received might be attributed to these. On the contrary, those women who gave birth in small local hospitals were more likely to experience continuity of care and to be cared for personally by health professionals.

Table 4-17: Chi-square test of the relationship between respondent's length of time since last childbirth experience and respondent's ratings of care during labour and delivery

Length of time since last childbirth experience		Think about your labour/childbirth, how satisfied were you with the care you received?			Total
		Satisfied	Somewhat satisfied	Dissatisfied	
Within the last 5 years	Count	70	29	13	112
	% of Total	34.8%	14.4%	6.5%	55.7%
Over 5 years ago	Count	79	8	2	89
	% of Total	39.3%	4.0%	1.0%	44.3%
Total	Count	149	37	15	201
	% of Total	74.1%	18.4%	7.5%	100.0%

Chi-Square (χ^2) = 18.135, df = 2, p-value = 0.000 < 0.05

4.5.8.7. The rest of the survey results

The statistical tests find there is not any association between the respondents' length of time since last baby and the rest of the survey results. Selected test results are presented in the section below. There is no relationship between the respondent's length of time since last baby and:

- Their attendance at antenatal check-ups (p value = 0.065 > 0.05)
- Place of antenatal check-ups (p value = 0.141 > 0.05)
- Choice of where to go to get antenatal check-ups (p value = 0.547 > 0.05)
- Choice of health professionals (p value = 0.941 > 0.05)
- Their attendance at antenatal classes (p value = 0.199 > 0.05)
- Place of antenatal classes (p value = 0.566 > 0.05)
- Their views on how well antenatal classes had prepared them for childbirth (p value = 0.222 > 0.05)
- Choice of place of birth (p value = 0.522 > 0.05)
- Place of birth (p value = 0.134 > 0.05)
- Type of delivery (p value = 0.13 > 0.05)
- Length of breastfeeding (p value = 0.874 > 0.05)
- Their view on how important it is to have one main carer (p value = 0.374 > 0.05)
- Their view on the preferred model of care (p value = 0.140 > 0.05)

4.6. Summary

This chapter has provided some insights into the experiences, views and preferences for maternity care for women in rural areas in Tasmania by way of presenting the results of a questionnaire survey. These results address the research questions developed earlier in this study. It has been found that the majority of the women attended antenatal check-ups. . However, just over half of the women attended antenatal classes at major hospitals, local hospitals, from local GPs or independent midwives. These women also gave birth at different places including at hospitals, at home and in cars. For the women who gave birth in hospitals, the majority of them stayed in hospital for 3-5 days after the birth of their babies. Most of the women in the study attended postnatal check-ups and baby check-ups.

Regarding the quality of maternity care, it has been found that the majority of the women were satisfied with the antenatal care and postnatal care they received. They were also happy with the antenatal classes which had prepared them for childbirth. However, there are a large number of respondents who think that the antenatal classes had not prepared them enough or at all for looking after their newborns. Although most of the women were satisfied with the care they received during labour or childbirth, nearly 8% were dissatisfied with the care provided to them. Over 10% of the women said their postnatal stay in hospital was too long, 9% too short. The rest (79%) thought it was just right.

In terms of choice of places for maternity care, nearly 50% of the women in the study reported that they did not have a choice of where to go to get antenatal check-ups. Over 50% said they had no choice with regard to health professionals who would provide care for them during pregnancy. Regarding place of birth, almost 60% of respondents had no option of where they could give birth. The statistical results show that there is an association between the women's highest level of education completed and their choice of care. In addition, having a choice of health professionals also affects their satisfaction with antenatal care.

Furthermore, the survey results reveal that over 60% of respondents experienced continuity of care by seeing the same or two health professionals during their

pregnancy. The rest had different health professionals each time. The survey results indicate that the respondents believed that it is important to be cared for by one main carer. Although a large number of women considered that it is important to be cared for during labour by a midwife whom she had met during pregnancy, nearly 15% thought it is not important. The women's experience in receiving a continuity of care also has an effect on their view on continuity of care. Furthermore, the statistical analysis finds a relationship between the women's experience of having continuity of care and their satisfaction with the antenatal care they received.

In addition, the survey results have found that only a small number of respondents were not concerned about the driving time to be confident of safe delivery. Most women expressed that they were willing to travel up to two hours' drive to give birth to their babies at a safe place. The findings suggest that women in the study strongly expressed their view to have antenatal check-ups, antenatal classes and postnatal check-ups provided in locally in their communities. Furthermore, the majority of them believed that it is important to have a maternity unit in their local areas.

The women's view on the model of care presents an interesting result. Over 50% preferred the conventional model of care, almost 40% the midwife-led model of care and approximately 9% the planned home birth model. Chi-Square tests have demonstrated that the type of delivery and the type of health professionals providing care during pregnancy affect the women's preferences of the model of care. The study finds no relationship between age group, level of education, the nearest maternity unit and the women's view on the preferred model of care.

Travel time to the nearest maternity unit is a factor that affects the women's view and experiences in a number of aspects. Firstly, it affects the women's view on their willingness to travel to a safe delivery unit. Secondly, travel time also affects the women's place of care including place of antenatal check-ups, antenatal classes and place of giving birth. Finally, it affects women's view on how important it is to have a maternity unit in their local areas.

Importantly, the study has found that the women's length of time since last childbirth experience significantly impact their experience in maternity care. The Chi-square test results suggest that more of the women who gave birth recently travelled further to the nearest maternity units and experienced different health caregivers. Furthermore, these women experienced poorer continuity of care and more of them were not satisfied with the antenatal classes, antenatal care and care during labour and delivery. In contrast, the women who gave birth more than 5 years ago had shorter travel time to the nearest maternity units and experienced better continuity of care and more were satisfied with care and antenatal education. These results might reflect the fact that rural communities in Tasmania in particular and in Australia in general have experienced the loss of local maternity health services which used to exist and provide better care for rural women.

4.7. Conclusion

Maternity care experience can be a simple or a complex process as it depends on various factors such as the availability of health services, the quality of health care, the choice available for decision making, and the level of support. This chapter has provided some insights into these aspects through the lens of data analysis. However, despite the usefulness of these insights into understanding the issues of childbirth and ante and post natal care of the women participating in this study, there are still unanswered questions about the reasons underlying those facts and figures. The next chapter on qualitative analysis will provide other insights.

Chapter 5: Qualitative Data Analysis

5.1. Introduction

By employing both quantitative and qualitative methods in this study, not only can the consistency of findings obtained through different instruments be tested, but also the results from one method can be clarified and illustrated by the use of the other method. This chapter presents the results of qualitative analysis based on the data collected during interviews with 22 women, 20 health professionals and from the written texts of survey respondents. The data analysis of the interviews and the comments from the survey respondents are addressed to research questions 1 and 2 which examine rural women's needs in maternity care and available services. In order to reflect the purposes of the study, the data is presented under emerging themes. However, it is noted that there were other possible ways of presenting the data, most notably, a focus on individual women in context through the presentation of a series of in-depth stories. The analysis of results is presented in 6 major themes, namely: access issues in rural areas; continuity of care ; information for services; support; health professionals' and women's views on different models of care; and health care system constraints. Under each theme, sub themes and sub-sub themes were developed. Before going into detail of these main themes, the characteristics of the participants are presented. This chapter ends with a concluding section.

5.2. Data collection and analysis

Chapter 3 discussed the details of the data collection and analysis for this study. The process is briefly reviewed before presenting the results. Data was gathered using semi-structured interviews with 22 women and 20 health professionals. In addition, more than 150 written comments from survey respondents were gathered.

While quantitative analysis focuses on the numeric features of the data and the relationship between various variables so that some generalisation can be made,

qualitative data analysis provides a different kind of insights which are not for making any generalisation but gives meaning to human experiences which cannot be adequately presented in statistical terms. This is why the term 'quantitative' is about number and qualitative is about meaning. However, they are not mutually exclusive in the sense that they both provide relevant information about the discourse and its members. In other words, they provide a different kind of insights which can be used as 'evidence' in support of the aim and objectives of a research project.

It is important to note that there is a consensus among quantitative researchers on how to analyse quantitative data by using statistic concepts and tools which are consistently used by them. This is not the case in the qualitative research discourse where there are different views and opinions on how to analyse and interpret qualitative data. Even the terms are not always used consistently among qualitative researchers.

The qualitative data analysis used in this study includes a mixture of grounded theory, thematic analysis and phenomenology. The data gained from the interviews with the participants were firstly transcribed and stored in different documents according to participants. The raw data was merely a surface presentation of exactly what the participants said. There were linguistic errors here and there and it was expected that the interviewees were involved in the meaning-making and meaning sharing process with the interviewer. Thus the texts were marked with fillers such as 'um, ah, you see, Ok" and some repetitions. This raw data indicates the authentic social context of interpersonal communication.

The next step after transcribing the spoken data into written texts was the process of coding to identify concepts and issues which caught the researcher's attention. The coding was facilitated by the use of Nvivo, particularly the use of different nodes. Some nodes were independent and others were interrelated. At this initial stage of coding, it was important for the researcher to invent as many free nodes as possible so that the analysis would not lose some aspects which initially tended to

be seen as irrelevant or trivial to the study. This is where grounded theory was useful in coding and node placement and identification.

Grounded Theory Analysis is the method most suited to the analysis of the qualitative data in this study. Grounded theory is used to capture information needed to explain the needs of rural women in maternity care and the unmatched gaps between those needs and services currently provided. According to Glaser and Strauss (1967), theories are either deduced from logical assumptions or generated from observation. Grounded theory provides the structure often lacking in other qualitative approaches without sacrificing flexibility or rigour. The results lead to an evolutionary body of knowledge that is grounded in data. According to grounded theory, the important concepts and issues are grounded in the raw data and it is the task of the researcher to bring them to the surface.

The next step was the use of thematic analysis in identifying the topics, issues and themes by extensively going through all the codes and nodes and establishing their connection. The identification of the emerging themes from the raw data was facilitated by certain standard interview questions so that some common threads could be made, but this process also allowed other merging themes which were not derived from the standard questions but from the thoughts and feelings of individual interviewees.

Thematic Analysis is the process of searching for themes that emerge as being the important descriptions of the phenomena (Fereday & Muir-Cochrane, 2006). The process involves the identification of themes through careful reading and re-reading of the data; or line by line coding; or word by word coding (Fereday & Muir-Cochrane, 2006; Rice & Ezzy, 1999a; Thomas & Harden, 2008). Similar to Grounded Theory Analysis, Thematic Analysis also has three stages of data analysis including: (1) deciding on sampling and design issues; (2) developing themes and codes; and (3) validating and using codes. However, since this research utilises both approaches, stage two of Thematic Analysis which is Developing Themes and Codes was applied in the analysis process and integrated into the Grounded Theory Analysis.

5.3. Data analysis process

This section presents the data analysis process from the initial to final coding. Each coding category shows connections and relationships from one to another. These coding processes play an important role in illustrating the emergence of the key themes and sub-themes which form the basis of data analysis results and presentation.

Table 5-1: The first step of coding: Initial or open coding (free nodes)

Free Node	Name
1	Women's controls
2	Unexpected life changes
3	Travel involved
4	Support for new parents
5	Strategy to avoid travel
6	Recommendations
7	Reasons for not attending antenatal classes
8	Positive experiences
9	Pain relief
10	Options for care
11	Negative experiences with hospitals
12	Need to be listened to by health professionals
13	Need for a female doctor
14	Need for services
15	Needs for the postnatal period
16	Need for more access to a child health nurse
17	Need for privacy
18	Midwifery care
19	Length of stay in hospital after birth
20	Lack of services
21	Isolation
22	Informed information
23	Home birth
24	Growth and sustainability of rural areas
25	Experiences with local hospital
26	Continuity of care
27	Collaboration between health professionals
28	Closed services
29	Breastfeeding
30	Antenatal education
31	Antennal care
32	Access needs

The list of themes listed in Table 5-1 shows the results of open coding from the raw data. As discussed earlier, the codes appeared to be more abstract themes than the actual data. However, as the coding continues, key themes and sub-themes emerge as shown in Table 5-2. It presents the axial coding (tree nodes) process resulting from open coding. In this section of the coding process, themes and sub-themes emerged to interconnect with the data that had been coded and identified.

Table 5-2: Axial coding (Tree nodes)

Themes	Sub-themes
Antenatal education	<ul style="list-style-type: none"> - Not a first time mother - Not available locally and too far to travel - Other reasons - Prepared well for childbirth - Not prepared well for childbirth
Informed choices, information and services	<ul style="list-style-type: none"> - Level of education - Resources - Private health insurance - Information for services
Sense of control	
Models of care	<ul style="list-style-type: none"> - Homebirth - Conventional care - Small maternity units without caesarean sections - Safety - Distance from hospital - Delivery type - Midwife-led care
Continuity of care	<ul style="list-style-type: none"> - Relationship with carer - Lack of empathy - Information management - Impractical practice - Quality of care
Travel related issues	<ul style="list-style-type: none"> - Cost and inconvenience - Limited resources - Away from family - Quick labour
Postnatal support	<ul style="list-style-type: none"> - Choices in feeding - Support from health professionals - Positive feedback - Negative feedback - Inconsistent advice - Family and friends support - Community support
Lack of services in rural areas	
Service Needs	<ul style="list-style-type: none"> - Needs for local services - Other needs
Growth and sustainability in rural areas	
Bringing back rural birth services	

The third coding process is selective coding in which a thorough reading and re-reading of analysis and the coding results leads to a higher order or more abstract construction of themes. This became the main emphasis for the presentation and

discussion of findings, as illustrated in Table 5-3. In this Table, 9 main themes are identified with their corresponding sub-themes and sub-sub-themes.

Table 5-3: Selective coding (Case nodes) Outline of the hierarchical order of key themes, sub-themes and sub-sub-themes

Themes	Sub-themes	Sub-sub themes
1.) Access issues in rural areas	Lack of access to maternity services	
	Rural women's difficulties in accessing maternity services	<ul style="list-style-type: none"> - Financial burden - Inconvenience - Transport difficulties - Risk of having inadequate care - Social disruption - Risk of labouring en route - Anxiety
	Rural women's access needs	<ul style="list-style-type: none"> - Antenatal care needs - Postnatal care needs - Complete care at local hospital
	Health care system constraints	<ul style="list-style-type: none"> - Workforce shortages - Cost constraint
2.) Quality of care for rural women	Continuity of care	<ul style="list-style-type: none"> - Lack of empathy - Inconsistent advice - Relationship with carer and satisfaction - Impractical practice - Qualities affecting satisfaction
3.) Informed services	Lack of choice and information	-
	Factors affecting maternity choice	<ul style="list-style-type: none"> - Level of highest education - Resources Private health insurance
4.) Support	Infant feeding support	-
	Family and friends support	
	Community support	
5.) Health professionals' and women's views on different models of care	Trust in medical model	
	Medical model versus empowerment	
	Lack of support for planned home birth	

	Factors affecting women's preferences on the model of care	- Distance from hospital Type of delivery
	Planned home birth model of care	- Women's choice - Cost effectiveness - Free births - Differences in training and philosophy between midwives and obstetricians - Birth centres- an alternative to home birth
	Maternity units without caesarean	- Ensuring safety - Sustainability concern - Safety and quality concern

The following sections present the results of qualitative analysis, starting with an overview of demographic characteristics of the participants followed by the results of the interviews and comments from survey respondents.

5.4. Key characteristics of the participants

5.4.1. Characteristics of interviewed women

Twenty two women participated in the semi-structured interviews. The participants' demographic backgrounds such as age, educational level and language spoken at home were obtained during the interviews. The main reason for getting this type of information is that the background information may shed some light into the complex issues about maternity care. The key characteristics of the participants are illustrated in Table 5-4.

Table 5-4: Key characteristics of interviewed women

	Number of participants (N)	Percentage (%)
Age groups at time of survey		
- 22-30 years of age	4	18.18%
- 31-40 years of age	15	68.18%
- over 40 years of age	3	13.64%
Level of highest education		
- Secondary school	5	22.73%
- University	11	50.00%
- Other	6	27.27%
Language spoken at home		
- English	22	100.00%
- Other	0	0.00%
An Aboriginal or Torres Strait Island Background		
- No	20	90.91%
- Yes	2	9.09%
Most recent baby/babies		
- Less than a year ago	1	4.55%
- 1-2 years ago	8	36.36%
- 2-5 years ago	13	59.09%
The nearest maternity unit		
- Less than an hour's drive	11	50.00%
- 1-2 hours' drive	9	40.91%
- more than 2 hours' drive	2	9.09%
Delivery type		
- Vaginal delivery	11	50.00%
- Induced labour	5	22.73%
- Caesarean delivery	6	27.27%

Table 5-4 shows that the majority (68.18%) of participants were aged from 31-40 years old. With regard to level of education, 50% of participants had obtained university degrees. All participants spoke English at home. Only two participants (about 9%) claimed that they had an Aboriginal or Torres Strait Island background. Almost 60% of participants had had childbirth experiences in the past 2-5 years. In terms of delivery type, half of the participants had a vaginal delivery while almost 30% had caesarean operations. The interviewed women had a similar demographic profile to the survey respondents except in time since last delivery.

5.4.2. Characteristics of interviewed health professionals

Twenty health professionals participated in the semi-structured interviews. The participants' demographic background such as profession, length of work experience and the location of current work were obtained during the interviews. As stated in the previous chapter, obtaining this type of information allows the researchers to investigate if there is any association between their demographic backgrounds and their views of maternity care. It is noted that the views of GP, health professionals who work in birthing centres and do home birth are underrepresented in this study. It was due to the time constraint of the study itself and busy schedules of the health professionals. The key characteristics of the participants are illustrated in Table 5-5.

Table 5-5: Key characteristics of interviewed health professionals

Profession	Number of participants (N)
MIDWIFE	9
Work Experience	
- 6-10 years	1
- 11-20 years	4
- 21-30 years	1
- 31-40 years	2
- Over 40 years	1
Current work place	
- Community health centres	4
- Hospitals	5
OBSTETRICIAN	5
Work experience	
- Less than 5 years	1
- 6-10 years	2
- 21-30 years	2
Current work place	
- Hospitals	5
CHILD AND FAMILY HEALTH NURSE	6
Work Experience	
- 6-10 years	1
- 11-20 years	1
- 21-30 years	1
- Over 40 years	3
Current work place	
- Community health centres	6

5.5. Access issues in rural areas

5.5.1. Lack of access to maternity services

The data from the survey with women and interviews with both women and health professionals showed the obvious lack of maternity services in rural areas in Tasmania. There were over 150 (out of 210) responses to open ended questions in the survey, from rural women on the lack of maternity services in rural Tasmania. Some survey respondents expressed their concern about lack of services in many areas of health care in their community, especially when there were many young families in the area.

I work with families who have children aged from birth to five years. There is a distinct lack of support for mothers, fathers and children in this group. There is also a distinct need for intervention services for (i) Preterm births; (ii) Fathers/isolation/depression; (iii) Post natal depression; (iv) Early childhood services i.e. speech, physio. Maternal and child health nurses should visit the local health centre at least weekly; and they should liaise with schools /kindergartens for services in the area. (Survey respondent 021)

Our local hospital is far too small. At present there would be no space for any maternity care. Child health nurse does not come every week and I think they should. There are many young families in our district. (Survey respondent 016)

Many respondents commented that they did not have any maternity services in their area and that they saw this as a serious problem.

We don't have any care in [name of the rural town]. So there is a huge lack here. (Survey respondent 168)

Lack of services full stop. (Survey respondent 084)

Antenatal education is often available in major hospitals but limited in many rural areas. It was observed by our health professionals that rural women expect to have this service available in their communities. When maternity services are not

available in the local community, women have to travel to access the required services. Thus, according to some of the health professionals in order to avoid travelling, women are less likely to attend all of their appointments.

Every time they have an antenatal visit, it is a huge event ...so it probably means that they are less likely to go and see someone for minor concerns. They would wait until they are really unwell or really concerned before they make the effort to come. Travelling puts a lot of strains on the women. Thus, they are less likely to attend all of their appointments and to come in if they have got concerns. (Obstetrician 1)

This is strengthened by the interviews with women:

I did not attend any antenatal classes because the closest ones were in Launceston which is a 4 hour return drive. (Woman 13)

Furthermore, the results from the interviews with health professionals reveal that when the local hospital does not provide maternity services, women have to rely on their GPs. However, with the current workload of GPs in rural areas, GPs may not be available to provide care for the pregnant women. As a result, women may not get proper antenatal care in their local communities.

They rely on their GPs. We all know that the GP services are stretched to their maximum at the moment; therefore I suspect that there are a number of women out there who do not get adequate care antenatally simply because they can't get into a doctor or there is not a doctor available. Consequently, they are disadvantaged because of the lack of services in rural areas. (Midwife 4)

The comment from one survey respondent confirmed the above statement.

None [maternity services]available! Local rural doctors are not interested in any difficult cases they want a quiet life. (Survey respondent 186)

Rural women may not only receive proper antenatal care but also postnatal care. According to some health professionals, certain postnatal care services are limited in rural areas and rural women often find it difficult to access them.

One area of women's expectation that has not been met for a long time is in postnatal care. A lot of women are aware that we have an extended midwifery service but a lot of them find it difficult to access especially if they live in rural areas. (Midwife 5)

5.5.2. Rural women's difficulties in accessing maternity services

As reported in section 4.2.6 in the quantitative findings chapter, 58.4% of the survey respondents lived within an hour's drive of the nearest major hospital. Nearly 40% of the women had to drive from 1 to 2 hours to the nearest major maternity hospital. The rest of the respondents (4.3%) had to travel for more than 2 hours by car to the nearest birthing major hospital. The interviewed women also had to travel from less than an hour to more than 2 hours to access maternity services in the major hospitals. In particular about half of the interviewed women said that the nearest major hospital when they were having a baby was less than an hour's drive away. Nearly 41% of them were 1-2 hours' drive away from the nearest maternity unit. About 9.0% had to drive for more than 2 hours to the nearest maternity hospital. The findings from the interviews with women and health professionals reveal that women experienced many difficulties associated with travelling. The sub sections below present the issues that rural women have to encounter in accessing health services, namely financial burden, inconvenience, transport difficulties, risk of having inadequate care and labouring en route, social disruption and stress and anxiety.

5.5.2.1. Financial burden

The first issue relating to travel is the additional cost incurred. The further the distance women have to travel to the major hospital, the higher the expense. Many women in the study talked about how expensive it was for them to travel.

The cost of travel was pretty expensive and also trying to organise for someone to look after my other son because he doesn't travel well. (Woman 13)

Cost was a major factor and also time waiting as I had children in school I had to be home by 3pm. It didn't matter what time your appointment was you were always kept waiting over an hour. (Woman 19)

In addition, the interviews with the health professionals recognised that rural women had to encounter financial burdens when they had to travel to major hospitals to access care. This creates many issues for women and families including time, expense and transport.

They need to plan for all unexpected outcomes, the burden of travel, with further to go, more time and more expense and the need for transport facilities. (Child and Family Health Nurse 1)

5.5.2.2. Inconvenience

The second travel related issue is inconvenience. It is often not comfortable for a normal person to drive a long distance. For pregnant women, it is even more uncomfortable to make a long journey, especially in the later stages of pregnancy.

Yes. Time, and the inconvenience of having to travel to town - circa one hour each way, plus half an hour to find a park and walk to the appointment. This became more of a problem later in the pregnancy, when I had back problems which really meant I needed not to be sitting driving for 2.5 hours in one day. (Woman 4)

In addition to the long-time taken in travel, the problem was increased by women's other commitments.

... I had to travel so far, and wait forever in the waiting room. It was always a struggle to get back in time to get my other children from school. (Woman 17)

Some participants had to take their other children with them to an appointment. These women found it very inconvenient to deal with issues such as travelling, finding parking, carrying and dealing with children.

Yes, to some degree, travelling over an hour, finding parking, carrying my then two year old daughter who may have been having a tantrum at the time – and running a little late. It was hard. This actually did happen, and I remember standing at the counter of the reception – giving them my ‘client number’ – having quite pronounced contractions from carrying her so far so as not to be late and miss my appointment...It’s hard to find babysitters all the time for my other two kids. (Woman 1)

For women who had work commitments, travelling to access services caused not only inconvenience but also fatigue.

Yes, a 45 minute drive into Launceston for 2 hours in the evening when already feeling tired from pregnancy and working full time. (Woman 9)

5.5.2.3. Transport difficulties

Transport difficulties are a substantial problem for rural communities. Pregnant women in these communities need to travel to a major hospital to access health services but in many rural places public transport is not available. Transport is a more serious issue when women have low incomes and restricted transportation.

It is one and a half hours drive south from Royal Hobart Hospital and if the car has broken down then there are no buses available for the trip. E.g. when I had my daughter three years ago our car blew up four days earlier, so we had to borrow someone’s car and she had to stay in hospital for a week [which meant we had to travel daily]. (Survey respondent 075)

I do know of many people in our community who have limited access to public transport and many who do not have access to a vehicle or even have a licence! (Woman 18)

One woman spoke of her difficulty in reaching the major hospital when she did not have her own means of transport.

Anything is better than nothing. High risk pregnancy needs to be cared for. I had to catch a bus (1.5 hours each way) for 6 months of pregnancy for a 5-10 minute appointment at the [major hospital]. Awful experience! (Survey respondent 013)

Another respondent added that young mothers may find it difficult to travel to access maternity services if they had limited resources.

Young women have to travel for birth two hours or more and to be away for at least a week. Sometimes people don't have the resources to do this, especially young mums. (Survey respondent 083)

5.5.2.4. Social disruption

Being away from family to give birth in a major hospital could be an issue for rural women and their families. Women's families might not visit them often in hospital due to long distances and financial issues. Rural women might feel isolated because they are away from their family members in an unfamiliar hospital. One of the participants in the study was alone in labour, due to the distance from her community to the hospital. Labour is the most critical time for birthing women. In addition, her partner missed the birth of their child and she said that this was a major disappointment for them both.

My partner and my mother were sent home, as they thought I was nowhere near ready. One hour and 45 minutes later I gave birth. My partner missed the birth and I was on my own. I couldn't believe that they were made to go home, as we live over an hour away from the hospital and I told them I have quick labours. It didn't make any difference; they were not allowed to stay. This caused major heart ache to my partner and me. (Woman 18)

Apart from the long drive from her community to the hospital, the same participant believed that there is not enough consideration for rural women when it comes to

childbirth. Her partner was sent home despite being one hour and 45 minutes' drive away from the hospital. As a result, he missed the one of the most important events in his life, the birth of his child.

I believe that there is not enough consideration for rural ladies when it comes to childbirth. If we had lived in town it wouldn't have mattered that my partner was sent home. But by the time he got back to [name of the rural town], the nurses were on the phone to him telling him to get back quickly. With just over an hour's drive he missed the birth and has had issues dealing with that ever since. (Woman 18)

Some health professionals recognised that being separated from the support of locally based family and friends can be an issue for women if they are required to stay in hospital for longer and if they have other family commitments.

Given the often brief time spent in a maternity hospital these days, perhaps being separated from the support of locally based family and friends is not such an issue. However, it certainly would be if the woman is required to stay in the hospital either antenatally or postnatally for any length of time. (Child and Family Health Nurse 2)

If they have got other family commitments, the first big hurdle is that they have to leave home and leave their support network and leave maybe their other children to have the same access to good quality care. The financial problems come into it again, but probably mostly the disruption from their support network and their home environment. (Midwife 7)

5.5.2.5. Risk of having inadequate care and labouring en route

Due to the lack of maternity services in rural areas, according to some of health professionals, there is a chance that women might choose to give birth at home without assistance of any health professional or in the local hospital which does not have standard maternity services because they want to stay in their local community.

They also tend to opt for other options. They are more inclined to give birth to a baby at home or in a local hospital which does not have specific maternity services because they want to be around their family. (Obstetrician 1)

In addition, there is also a risk of having labouring en route. When a woman has a quick labour, the distance to the hospital becomes very important, sometimes even critical for her. One survey respondent recalled:

We have no maternity care available in our area. The closest is Hobart which is one hours' travel... In my situation even one hour is too far, particularly when my first child was born within 3 ½ hours of the first contraction. (Survey respondent 011)

Some participants were just lucky enough to have a baby delivered within a very short time after arriving at the hospital.

We are one and a half hours from the hospital. I arrived in plenty of time for baby one but could not travel in the car for baby two (quick labour and too uncomfortable sitting up and rough winding roads). So I waited at a local multi-purpose centre for an ambulance. I got to the hospital and my baby was born about five minutes later. (Survey respondent 009)

Some women have given birth in the car on the way to the major hospital.

We don't have any services. Why do women have to travel to Burnie to have a baby? My wife did not last the 15 km and delivered on the front seat of our car! (Survey respondent's husband 0114)

The risk of giving birth en route was also observed by the health professionals in the interviews.

There is a risk of childbirth because of the long trip to the closest midwifery hospital to Launceston. (Midwife 3)

5.5.2.6. Stress and anxiety

Being away from their familiar environment and social network can cause stress and anxiety to women. Most of the health professionals acknowledged that women from rural areas can find being away from home especially difficult. They often feel 'isolated' and 'lonely' as they are separated from their partners, other children and families whilst being kept in the hospitals following childbirth.

A woman can feel very isolated when there is a need to be admitted to a large medical institution and it means being separated from her family. This can cause her high levels of anxiety particularly if she is concerned for other children at home. (Midwife 2)

Tasmania is the coldest state in Australia in winter with frosty and foggy weather which would make a long drive more difficult and inconvenient. Many women raised travel related issues that caused them much strain and stress.

Yes there is a lack of services it causes a lot of strain and stress on families having to travel to Burnie to access these services especially in the winter, not to mention the added financial burden with the travel. (Survey Respondent 0107)

5.5.3. Rural women's access needs

5.5.3.1. Antenatal care needs

As reported in sections 4.4.2.1 and 4.4.2.2 in the survey results chapter, the majority of the survey respondents agreed and strongly agreed that antenatal education and checkups should be provided locally in their rural communities. The interview findings and the qualitative data from the survey confirm and interpret these survey results. One local service that was highlighted by many interviewed women and survey respondents was antenatal classes. Interviewed rural women highly valued antenatal education which is consistent with the survey results presented in the last chapter (see figure 4.24) suggesting that the majority of the survey respondents believed that antenatal classes had prepared them well for their childbirth.

My partner and I attended antenatal classes before the birth of our first child. The classes answered all our questions and prepared us (as much as possible) for the birth. (Woman 12)

However, not all women in this study could attend antenatal classes because they were not always available in their local communities. Some classes were held at night in the major hospital which made it even more difficult for expectant mothers to join.

It would be great to have classes locally as the closest is in Launceston 40 kilometres away and the classes are held at night, which makes for a very long day. (Woman 6)

Many participants and respondents suggested that a midwife should come to their local hospital regularly to provide antenatal education and that this would save women from travelling for a long distance to receive the service.

A midwife to come to my local hospital once a week or a fortnight to do the antenatal checks and maybe run a class designed for people who have to travel so far. (Respondent 068)

It was observed by the health professionals in this study that women expect to have this service available in their communities.

I think women expect to be able to access maternity services...but things like antenatal classes do not get done because those resources are limited in rural areas. (Midwife 4)

The second service which was in high demand by women in this research was local check-ups. Some women wanted their local GP to do their antenatal check-up, but this service was not available from their GP. Therefore they could not avoid travelling to the major hospital and all the travel related issues which that entailed. Many strongly expressed the need for antenatal check-ups to be available locally.

Maybe they could have clinics for rural Mothers-to-be in rural towns with a midwife from the Hospital if it is a normal pregnancy. (Woman 5)

Check-ups in clinic type environment at Beaconsfield Hospital or somewhere local. (Survey respondent 048)

Their suggestion was to have a local or visiting specialist who could attend to childbearing women within their community.

A visiting obstetrician/gynaecologist would be a great service for our country community. (Survey respondent 054)

Just be able to have a local doctor to take care of you and a midwife during your pregnancy and local ultrasound as I was travelling all the time. (Survey respondent 134)

5.5.3.2. Postnatal care needs

Many rural women in the study expressed the desire for their postnatal care and services to be available in their local community. This is consistent with the survey results reporting that the majority of the respondents agreed and strongly agreed that postnatal checkups and baby checkups should be provided locally (see section 4.4.2.3).

During their pregnancy it is obviously not comfortable for women to travel for a long distance, especially in the later stages of pregnancy. However, when they have had the baby, travelling is still be an issue for both mother and newborn.

I was given a number to call for Hey Mums group, but there was a three month wait to join a group. I was unable to attend the first two weeks and was told that this would not be appropriate and that there would be a further waiting period for the next group. The group was also held at 9.30am in Launceston – very impractical for those living outside of Launceston. The Hey Mums group should be available in local areas and much more user friendly. There was also a noticeable absence of support groups for older first time mums – all geared around young mums. (Women 9)

Lack of support for older first time mothers i.e. 3 months wait for Hey Mums group and only in Launceston at 9.30 too early for new bub. (Respondent 173)

Local postnatal services would be much more convenient for women and their family.

Once the baby is born it would be great to be able to go to a smaller hospital (closer) so mother and baby can be monitored and also not as much hassle for family members to be able to visit. (Survey respondent 075)

5.5.3.3. Home support after childbirth

Home support in the early postnatal period is another service which was requested by women in the study. Rural women greatly value the service because they do not have to travel with their newborn.

I think it is important that women do not have to travel far to receive help in the period following leaving hospital e.g. the first one to two weeks. It is important for child health professionals and midwives to make home visits over this time. (Survey respondent 006)

Many participants and respondents expressed their need for more home visits in the period immediately following childbirth.

More care or help after baby is born and you return to home, instead of just being left to it. (Survey respondent 167)

According to our respondents, home visits are even more important for some groups of mothers such as young mothers and those with risk identified infants. Those groups of mothers need more home visits and support from their community.

More home visits should be pre-planned and compulsory for infants identified as at risk and more support needed for those mums. (Survey respondent 186)

I think some new mothers are going home too early as they cannot cope with a baby as they are too young and not sure about what to do. There should be more home visits to young mothers. (Survey respondent 171)

Some health professionals recommended extending the cover and duration of the extended midwifery service for women in rural areas. This service can be provided by the available midwives in local communities. This suggestion is consistent with the findings from the interviews with women.

Definitely extend the cover and duration of the extended midwifery service. Also develop a package of support for existing midwives in outlying areas. Anecdotally, it appears the requirements for maintaining registration for these rural midwives is very difficult to achieve. (Child and Family Health Nurse 2)

5.5.3.4. Child health services

Women in our research valued the importance of this service. However, access to the child health service in rural areas is limited.

The health care nurse is wonderful it is a shame they do not have more hours available – every second week. (Survey respondent 087)

... I do however feel rural areas are very lacking in child health services. In [name of the rural town] we have one child health nurse for one morning a week. (Survey respondent 149)

Another respondent, who was a preschool education program coordinator, saw lots of families with newborns', also recognised the high demand in her community for more access to a child health nurse.

As a parent and the 'launching into learning' coordinator at our local school, I would like to see more access to a child health nurse. We only have one child health nurse who visits our community one day per week between the hours of 10 am and 2 pm. (Survey respondent 003)

5.5.3.5. Complete care at local hospital

The survey results in chapter 4 indicate that 16% and 77.6% of the respondents considered that it is important and very important respectively, to have a maternity care unit in their local hospital (see section 4.4.2.4). The interview findings and comments from the survey in this section validate and clarify these findings.

The qualitative data from this study suggests that maternity services play a role in the growth and sustainability of rural communities. One participant in this research was in the situation where her GP was unable to provide maternity services to her because that GP did not have sufficient births to maintain her skills. The participant suggested that GPs should be encouraged to maintain and use their skills by undertaking shared care with a Birth Centre or working in birth intensive setting for a specific time each year.

...rural GPs should be encouraged to maintain and use their skills – she is an ex RFDS (Royal Flying Doctor Service) doc, more than capable, very experienced, but because she chooses to work part-time doesn't get the numbers to maintain her skills (or afford the insurance). Why not offer such docs a once annual hospital fortnight of birthing intensive, if they want to be able to maintain their skills and practise? Or why can't they do share care with the Birth Centre – if GP shared care with KYM (Know Your Midwife) program is available, why not with Birth Centre? ...My GP had worked with many of the birth centre and labour ward midwives previously, and is well respected by them. (Woman 4)

The lack of maternity services in rural areas is one of the reasons why health professionals could not stay in rural communities. One of the respondents described what was happening in her community:

There is a lack of nurses in rural areas...the constraints with providing midwifery training to rural staff. Staff are moving on and locals are losing skilled staff. There is also a lack of services for mother and family (mainly accommodation pre and post-delivery). (Survey respondent 109)

Not only health professionals may choose to move away from rural communities which do not provide maternity services, but rural women and their families also consider relocating themselves. Many residents of the rural community, especially those in their reproductive years, try to move. This affects the rural population (already being a small number) and therefore the growth of the rural community.

If I was further than one and a half hours away, I would be considering moving closer to the hospital as the birth got nearer. (Survey participant 127)

One participant explained that continuity of place of care should be supported. That means women should be provided with antenatal care, antenatal education and be able to give birth at a location within a half hour's travel from home. She suggested that those things could be achieved by enabling small hospitals in rural areas to have birthing spaces where local GPs could do deliveries.

Continuity of place of care should be supported – i.e. ideally specialist (free) exercise classes, prenatal classes, check visits, preferably birth should take place within a half hour of your normal residence. This means enabling small hospitals in rural areas (even nursing homes which formerly were hospitals), maybe to have birthing outposts, where local GPs could do deliveries. We should not be expecting people to drive up to two/three hours return from their normal residence for hospital deliveries (and therefore antenatal care if they want a birth centre low intervention birth). (Woman 4)

The absence of maternity services could lead to a lack of other services for mothers and babies. One respondent expressed her need for those services, and said that she felt isolated due to lack of support. She commented:

Mother's groups and social and learning opportunities for infants and mothers would be great i.e. yoga and child swimming for babies, especially as there has been a glut of babies born the last couple of years. I have a newborn and feel a little isolated. To encourage growth and sustainability of rural regional areas we need this support and facilities. (Survey respondent 012)

5.5.3.6. Bringing back rural birthing services

The qualitative data from the interviews with the woman and survey comments confirm the survey findings in the last chapter suggesting that rural communities in Tasmania have experienced a loss of local maternity care services, and that respondents believe that those which used to exist provided better care for rural women (see section 4.5.8). Specifically, the surveyed women who gave birth more than 5 years ago had shorter travel time to the nearest major hospital and were more likely to be satisfied with care and experience continuity of care. This is confirmed and strengthened by the qualitative data from the survey. Some respondents recalled their positive experience when they had given birth in their local community.

In my day, we had a maternity unit at the local hospital which was wonderful. Now it has gone. Yes, go back to local hospitals having a unit.
(Survey participant 075)

It was nice in our time to have babies in local hospitals; you could stay longer and knew you had good care. Not sent home next day - and no staff germ.
(Survey respondent 064)

Many respondents mentioned that rural birthing services used to be available in their community but now they have gone.

[Name of the rural town] did offer the option of childbirth in the hospital and it would be great for it to be again. (Survey respondent 045)

Some respondents saw no reason why low-risk women could not have their baby in their community as travelling to a major hospital causes a lot of problems.

Babies were born on the [Name of the rural town] for years and I see no reason why it can't happen again. It is better to have the family unit around you at this time especially with the mines here and shifts up the coast causes a lot of problems. Unless there is a medical reason for baby and mother to be in a major hospital they should have the option on staying on the West Coast to deliver. (Survey participant 107)

Another respondent suggested that rural communities needed much more attention from the Government and other health organisations who currently worked together in the city.

Departments [children's disability service], Education Department and other health organisations need to work together in regional areas rather than be city-centric and divided. Women need on-going support through until children are school age. (Survey respondent 069)

One respondent questioned the current service. Her friend had a stillborn baby at 32 weeks despite her and the respondent's pregnancies being very similar. The respondent was pre-natal at 30 weeks and her baby survived because of the great care she received 25 years ago. However, her friend lost her child and the respondent had wondered why it had happened. Was it because a maternity service was no longer available at their local community?

My only recent experience has been with close friends who had a stillborn baby at 32 weeks. Their pregnancy was very similar to my first daughter. I was pre-natal at 30 weeks and had a 4/6 baby by emergency caesarean at 37 weeks. She survived because of the great care I received 25 years ago! They lost their baby and I would question why she wasn't hospitalised as a pre-natal patient. If that had occurred perhaps their baby may have survived. (Survey respondent 110)

Another participant observed what has happened in her community when the birth services are not available:

From what I generally see, it is "call an ambulance when the baby starts to come" which is certainly sub-standard and putting ambulances in a bad position should complications occur. (Survey respondent 103)

There were a number of participants and respondents who believed that it would be much easier for them to have a baby in their local hospital. The major hospital

was extremely busy and did not have enough staff to give sufficient care to mothers and their babies.

We need complete local care available at [name of the local hospital]. Having a child in your local area would be so much easier or be able to come to [local hospital] after giving birth. [Name of the major hospital] is so busy and not enough staff to give sufficient care to baby and mum. (Survey respondent 53)

... I would like to have a hospital near our rural area for our community. That would make our life here much easier. (Survey respondent 090)

5.6. Continuity of care

The analysis of the quantitative data shows that most respondents in the survey were of the view that it is important to have one main carer responsible for their maternity care (see section 4.4.3.1). Furthermore, a large number of respondents believed that it is important to be cared for in labour by a midwife whom they had met during pregnancy (see section 4.4.3.2). The findings from the interviews with women and health professionals support and clarify the results from the survey on the issue of continuity of care.

5.6.1. Lack of empathy

Having continuity of care makes expecting mothers feel that they are genuinely cared for, and not just someone's job.

I believe that continuity of care with the same doctor is better because they know and remember you and you feel genuinely cared for. (Woman 14)

I think it is very important. It stops you from feeling like you are just someone's job. (Woman 19)

Having continuity of care is even more important for women in rural and isolated areas because they are often away from their family and have very little support.

Being cared for by one carer gives a birthing woman comfort and support at an important time in her life as a new parent.

Paramount. Many mums are away from their family and have very little support. This is a very intimate time in a new parent's life and we should be ensuring that the experience is as comfortable for the mum as possible. Not just taking pot luck on who will care for you because you are in the public system. (Woman 9)

I was lucky enough to have a fantastic OBGYN who took care of me from start to finish. Her practice also had ultrasounds. So the experience of having one person or team look after me was great and such a comfort with my first pregnancy. (Woman 6)

Women wanted their views to be considered and their questions answered, and they did not want to be given conflicting information and advice. However, some participants stated that they would only feel comfortable asking questions of a caregiver with whom they were familiar.

I believe it's very important. It makes you feel more confident about the impending birth as you feel more comfortable asking questions to someone who you are familiar with. (Woman 15)

I think it is very important so you can confide in them about personal questions about being a mum. (Woman 7)

5.6.2. Inconsistency

Having to see many health professionals caused inconsistency in advice and care. It has been found that many women in our study spoke about inconsistent advice from the midwives in terms of breastfeeding.

There were also differences between midwives in terms of the advice they gave for getting correct attachment etc. and by the time I left hospital I had grazed nipples because I was still struggling with attachment. Also, the

lactation consultant was only there on certain days and I missed seeing her, so I left the hospital with many unanswered questions. (Woman 20)

Where do I start! Inconsistent advice from midwives who were often insensitive. (Woman 2)

When different midwives give different breastfeeding advice, women can become confused and sometimes struggle to feed their baby. Women in our study expressed their need to be given consistent advice from health care providers.

All midwives have a different way of feeding, this should be streamlined. We get taught one or more ways. (Survey respondent 105)

Many participants agreed that although they had a lot of support from the midwives to breastfeed their baby, their attentions were almost overbearing. Sometimes women just wanted to be left alone to work it out without too much inconsistent advice and attention.

There was certainly a lot of support from the midwives to breastfeed my baby but I found their attentions a little overbearing at times and I often just wanted to be left alone to work it out rather than have them hover over me all the time in the first few days. (Woman 20)

...only interrupted by midwives who I found more nuisance/critical than help. There were too many opinions on how to breastfeed. Comments asking why I wasn't dressing baby (when I was aiming for skin-to-skin 'kangaroo' care, which is considered optimum for newborns). (Woman 4)

Not only women were aware of inconsistency in advice due to having to meet too many caregivers, so were the health professionals.

With the current system in the hospital it is almost impossible for one person to follow one particular patient throughout their pregnancy. And that is most of the time. They see one doctor, next time they see another doctor and each says different things. This means they complain. (Obstetrician 2)

When pregnant women see many different health professionals, it is inconvenient for both, in that that they are required cover the same issues several times. This may result in a situation where important information about the patient is missed. One participant believed that if she had had one carer through her pregnancy, her health problem would have been identified much sooner.

I think it's very important! I had a few irregular visits with my GP and a different midwife every time I went in for a check-up at the hospital, because of this a lot of information was missed and each person was only going off notes left from my last appointment. I had cholestasis of pregnancy but this was not picked up on until I was already 36 and a half weeks pregnant because no one really noted my complaints about the symptoms. I believe that had I had one carer through the pregnancy it would have been caught a lot sooner. (Woman 13)

Other participants added:

I have never experienced this but I think it would be lovely to have one person all the way through as we wouldn't have to cover the same ground all the time. (Woman 16)

Having the same obstetrician I think is crucial. It saves having to repeat things and also helps you to feel more comfortable - especially for your first child. (Woman 22)

5.6.3. Relationship with carer and satisfaction

Statistical tests in the last chapter have revealed that there is an association between continuity of care and women's satisfaction with care (see section 4.5.3.1). This is validated by the qualitative findings. Being able to have one caregiver who looks after a birthing woman during pregnancy, in labour and the early postnatal period helps a woman to build a relationship with her carer. Many women in this study believed that having one carer is important because the woman and carer know and understand each other and that makes them feel comfortable.

It was important to me, that this person knew what my fears were, where and what my birth plan was. Just made me more comfortable knowing that I knew the person delivering my baby and that they knew what I wanted. (Woman 12)

Some women chose to pay for a private midwife in order to have one carer throughout pregnancy, birth and postnatal care. One woman described her relationship with her private midwife as a trusted medical health professional who could lead her through the process of having a baby.

The caesar was a good experience, partly due to the pre, during and post support of my private midwife – who I'd built enough relationship with to know that if she said 'caesar', we were happy to go that way. If strange medical/nursing personnel had told me/husband without Terri's[midwife] backup, we/I would have struggled more to accept the necessity/reality. As it was, once Terri said 'let's go', I was like, 'right, let's go then!'. (Woman 4)

Building a good relationship between a woman and her caregiver is very important for the woman because they can get to know each other and build a certain level of trust and comfort with each other.

There is no chance to build a relationship with your care team when you see different midwives every time even in team midwifery. (Survey respondent 044)

Having a continuity of health professional is crucial. particularly important if there are mental health issues, and even more crucial that that person should be someone who knows the medical and psychological makeup of the person at times other than pregnancy and birth, in order to assess whether there are changes / increased risks i.e. a longer term health care provider for that individual, not just a birth/pregnancy specialist. (Woman 4)

In addition, many health professionals in this study recognised that continuity of care was one of the most important factors that made women satisfied with their

care. They had the same view with women on continuity of care which helped women and health caregivers build rapport.

I think continuity of care is important because there is a lot of care that you provide to women, but there is only one where rapport is built. It is not just about blood pressure and those sorts of things, so we have a team providing continuity of care for a very low risk woman. (Midwife 6)

I think continuity of care is the leading cause of satisfaction with maternity services and that has been shown in the study repeatedly. It does not matter who their caregiver is, but as long as it is continuous women might have satisfaction. The studies show private obstetrician and midwifery programs have continuity of care, followed by GPs and the rest. (Obstetrician 1)

It is not only the women who may be satisfied if they have one carer throughout their care, but also some health care providers would like to provide that mode of care for their personal satisfaction.

...certainly from a midwife's perspective personal satisfaction is something very important. Sort of like booking them in and you get to know them during their pregnancy and maybe doing classes with them and working with them upstairs and being around when they are giving birth following it right through. It is a wonderful thing and satisfying because you build up a trust relationship and a rapport. (Midwife 5)

5.6.4. Qualities affecting satisfaction

Women in this study were not as concerned about continuity of carer throughout as were some of the midwives. Many participants in this research valued the quality of care rather than having a single carer. They described the quality of service that they would appreciate as professional, supportive, understanding, helpful, excellent and above standard.

Not that important. I was happy to see different midwives as they were all very professional and lovely. (Woman 10)

I didn't have just the one carer and I feel very lucky to have been part of the midwife program at the Royal Hobart Hospital. There were times when perhaps it would have been nice to see the same person, but overall, I was more than happy with the care I received. Every midwife or doctor that I had contact with was very supportive, understanding, friendly and helpful.
(Woman 18)

[Consistency of carer is] not at all important. I was in the public system and could not fault it at all. Overall that meant that I was seen by a different doctor at each appointment but the level of care was always above standard. (Woman 8)

I didn't see the midwives as I was a high risk pregnancy (had blood clots before) so doctor A and doctor B always saw me. They were excellent. However, I didn't really mind who I saw, so long as they were an expert.
(Woman 3)

Having a single carer was very important for one woman, however, on the day she went to the hospital, her doctor was unwell and she was cared for by a health professional who was a stranger. Although the participant did not have her usual carer with her during her labour and delivery, she was extremely happy with the care she received.

I did regard this as very important, which is one of the reasons why I chose to go with private cover and be in the care of an obstetrician. However, as it happens on the day of my son's delivery, she was unwell and so it was a stranger who performed the C-section. In the end though I didn't feel as though this mattered as I was extremely happy with the care I received from her locum. (Woman 20)

5.7. Information about services

5.7.1. Lack of choice and information

The survey results from the previous chapter suggest that rural women experienced lack of choice regarding place of antenatal check-ups, choice of health professionals and place of birth (see 4.3.2). The results from the interviews with the group of women clarify these results and indicate that rural women were not informed about the services available to them.

Private midwife care is not available to the average person, luckily we could afford it. Also, most people don't know about it anyway even if they can afford it. (Woman 4)

Many comments from the survey also involved information about services. Many respondents claimed that they had missed out on some services which they should have had because they were not informed.

I only had two scans and one blood test, and no other tests. I did not know what needed to be done and no one told me (as I found out I should have had three blood tests and other tests). (Survey respondent 065)

Another respondent from the survey noted that the child health nurse did not visit her to do a baby check-up, not only because the hospital forgot to forward her file, but also because she was not aware of that service.

No child health nurse visited me, as the [Name of major hospital] forgot to forward my file and I was not aware of the service. As a result, there was no health check until my son was four weeks old. (Survey respondent 013)

In another case, a woman expressed her need to be informed about lactation consultants in her local community.

Lactation consultants need to be known about. It took me 3 months before I heard that one of the best lactation consultants lived just up the road from me - and I had severe breastfeeding problems! (Survey respondent 045)

In addition, some health professionals acknowledged that the stand-alone birth centres are not well known by women because they are 'not widely advertised' and 'the hospital does not associate with these centres'.

The birth centre in Launceston is not widely advertised. I certainly have a brochure about it in my office but I don't think that you would see it in the obstetrician's office. It is just a word of mouth and there are only two or three midwives who are working there. (Midwife 5)

One of the main concerns of new parents is how to settle their newborn, however if parents are well equipped with information that they need they often steer through it with ease.

...Only trying to get her to sleep - mainly at night. But I watched some settling videos (in the hospital) and once I got home and started the 4 hourly feeds, we had no problems getting her to sleep at night. After only 1-2 weeks she was only waking once during the night and even cut that out after about 1 month. (Woman 22)

When new parents are well informed about the services available to them, they can get help when they most need it. The participants appreciated Parenting Help Line and internet access because these services enabled them to access information quickly.

In the first 6 weeks I used the Parenting Line quite a bit – I think I would have felt quite lost if that resource wasn't available. Access to the internet was so important because it enabled me to get information and advice very quickly on the most trivial things and often helped to allay fears that I was doing something wrong. I would have felt even more isolated if I hadn't had internet access. (Woman 20)

5.7.2. Factors affecting maternity choices

5.7.2.1. Level of highest education

The survey results in the last chapter have demonstrated that there is a relationship between a woman's level of highest education and her choice of health professionals for antenatal check-ups (see section 4.5.5.1). This is strengthened by the interviews with the women, which suggest that women with a higher level of education had more choices of care due to their ability to search for the information they needed.

Yes, though the options were in part determined by my own ability to research them. I wanted a home birth and so I researched home birthing midwives. I asked around my friends and community first and I looked online. I also (in parallel) booked in with the midwives at the birth centre. (Woman 1)

Another participant with a tertiary qualification who wanted to achieve a natural birth searched and used all of options that were available to her.

...We also enrolled in the birth centre, as the best way to achieve natural birth in hospital i.e. a necessary adjunct to having a private midwife. This meant I also attended birth centre appointments. So I saw my GP, a private midwife, birth centre midwives throughout pregnancy; visiting hospital midwives immediately post birth; as well as my GP, private midwife, and lactation consultant longer-term post birth. Also a child health nurse (ten day home visit?) or whatever was standard in that regard. (Woman 4)

5.7.2.2. Resources

In terms of place of birth, some women in this study could choose where they gave birth to their baby by paying for a private midwife with their own resources. They believed that they had a choice in care because they could afford a private midwife to assist them.

Yes, but only because we had money, i.e. we could pay for a homebirth (actually via the baby bonus, which at that time was still paid as a lump sum). We planned on giving birth in the birth centre or at home (i.e. having a room to ourselves). We did not actively want to choose the place of birth (i.e. wanted to keep our options open) until I was actually in labour (see how we felt). Prepared for homebirth and hospital birth, knowing (the midwife) would be with us either way. (Woman 4)

5.7.2.3. Private health insurance

The participants with private health insurance had a much greater chance of having a choice of care giver. The participants without private insurance were advised about their limited of choice of care.

...We were also advised that going public meant that we had no choice in midwife, doctor, etc and that we would not have the freedom on delivery that would be available as a private patient. (Woman 9)

The participants with private health cover had a choice of obstetrician and that also meant that they could have continuity of carer.

I was in the private system so I saw my obstetrician at all appointments. I went with friends' recommendations and my GP on who would best fit what I wanted in my care and delivery. (Woman 2)

5.8. Support

It is crucial for postnatal women to receive appropriate support for a healthy transition through the stressful period of having a newborn. The results from the interviews indicate the importance of infant feeding support and social support for postnatal rural women who are often isolated and face lack of facilities in rural areas.

5.8.1. Infant feeding support

Many participants in this study did not have a positive experience of breastfeeding, often believing it was because they did not get proper support from health professionals. In some cases the poor treatment that women had experienced has left them not wanting to have more children.

...Breastfeeding decision should not be judged if you go down the formula path. I breast fed for 3 months and then I had breast refusal. [Private hospital] was hopeless and I got better support from the Royal in weaning and what to expect. Midwives in this State need to be better at actual care - bedside manner and respectful and not judgemental. My experience has left me not wanting to have any more children. (Woman 2)

Another participant added that she was very confident in feeding because she had breastfed her last three children. However, she almost gave up breastfeeding because of the unsupportive attitude of the nurses.

I had previously breastfed my last three babies, so was very confident in feeding. Unfortunately two nurses hounded me so badly that I almost gave up. It was horrible. (Woman 17)

Other unprofessional attitudes from the health care providers were expressed by another participant:

Yes, support from night shift midwives in regards to feeding. They were rude and very unhelpful. I felt like I was intruding on their time. (Woman 9)

It would have been nice to get some more support in the hospital. When I was having difficulties, the midwife I had was very rude. (Woman 13)

When health professionals are not supportive, women who are by themselves in the hospital and far from home and family may feel very isolated and confused. One participant recalled her difficult time when she was alone in the major hospital.

One midwife, who didn't have children, had me in tears everyday about not being able to breastfeed. I felt confused and terribly alone and it was the lady who came in to mop the floor that was my saving grace. She actually made me feel like I was not a failure for not being able to feed and that my child would be fine on formula...I was formula fed and I have no problems! (Woman 5)

Some participants felt that they were not successful breastfeeding their child because they did not get the guidance and support that they needed.

I felt when I had my son there wasn't enough support given to me concerning breastfeeding. I found it difficult to breastfeed and ended up giving up which felt due to lack of guidance and support. (Survey respondent 035)

5.6.2. Family and friends support

Although support in the early postnatal period is very important for women for a healthy transition, many participants in our study did not get enough support and found it difficult to cope with their new role. Living in rural areas or being new to the area are two of the reasons that women believed that they did not get adequate support.

I did not have much support. We're new to the area (and state) when bub was born so I didn't have a support network until bub was about 7 months old (she's 8 months old now). (Woman 13)

The participants believed that postnatal women needed much more support to cope with their new babies and other duties.

I had a little support but I never felt that it was enough. I think people forget (or don't know in the first place) how much support one could do with at this time, especially when there is another child to look after as well. (Woman 14)

Another participant talked about her difficulties when she received very little support in the postnatal period. Not only did she get no support from her parents or

parents-in-law, but none from her husband. In addition to this, she was living in rural area and could not drive due to having had a caesarean section. She was lonely and isolated in the house with her newborn.

I had very little support. Both my parents are dead and we are not on good terms with my husband's family and my husband's response to having a new baby in the house was to disappear for the better part of the day (even though he had two weeks paternity leave). Also, living in a rural area and also not being able to drive because I had just had a C-section I was completely house bound. The only visit I received was from the child health nurse, who fortunately spotted that my baby had thrush and was also able to give me some useful tips on wrapping/settling etc. Basically I had to work it out for myself and I found it a very difficult time adjusting to my loss of freedom etc. (Woman 20)

5.8.2. Community support

When women do not have support from their family and friends, particularly when they live in rural and isolated areas, support from the community becomes crucial. Some women in this research had to deal with some major personal losses of their family members and life events during their pregnancy and in the postnatal period. However, according to them, constant unwavering support of the auxiliary community nurses kept them afloat during those hard times.

The community nurses that came to my house after the birth of both my children were fabulous. They took the time to spend one on one with me and my children. I have always been fortunate enough to have strong family support, however shortly before the birth of my eldest my brother committed suicide which impacted upon my pregnancy and the shortly after the birth of my youngest their father and I split so it was the constant unwavering support of the auxiliary nurses that kept me afloat during those hard times. (Woman 8)

Another added:

I had great support as my husband died when I was 6 months pregnant and nurses were worried I would get very depressed however I never had any problems. (Woman 10)

5.9. Health professionals' and women's views on different models of care

5.9.1. Trust in medical model

Most (19 out of 22) interviewed women expressed their trust in the medical model. This clarifies the survey results on the preferred model of care indicating that nearly 55% of the respondents preferred conventional or medical model of care (see section 4.4.4.1). They believed that the medical model and hospital care would be the best place to give birth to their babies.

No options were given to me. The doctor gave me a referral to [name of the private hospital] and I just did what they told me to do...But I didn't really care, whatever was best for everyone and safest for bub. (Woman 3)

Safety is the primary reason given by women for their preference for the medical model of care. The majority of women in the interviews believed that being in a hospital with medical staff and ready access to equipment is the only way to ensure the safety of themselves and their newborns.

Not my cup of tea... rather be at the hospital in case anything went wrong. I found the birthing suite to be very well set up and relaxing and the way the staff handle it is fantastic. (Woman 3)

Many participants had experienced an unexpected emergency in their childbirth and strongly believed that it is safer to deliver in the hospital.

I definitely would not have a home birth, in my experience. We thought our twins were healthy and ready to be born, as I had had a check-up the day before and you never know what can go wrong as one of my twin's lungs

weren't developed. So I strongly agree on no home births, but everyone should be able to make their own choices. (Woman 21)

Participants who have experienced or witnessed the risks associated with childbirth preferred to give birth in a hospital setting where they can access medical help in case of any unexpected complications.

I don't have anything against someone else making that decision for themselves but I would prefer to be in a hospital in case of a scenario requiring emergency treatment. Having been a support person for my sister in labour one time and seeing what can happen unexpectedly, I personally couldn't do a homebirth. Her child wouldn't have survived a home birth. (Woman 14)

5.9.2. Medical model versus empowerment

Some health professionals in this study commented that the maternity care system in Australia had dominated by the medical model.

Maternity care over my working life has come a long way but it has been very Americanised –obstetric led care – which is slowly changing. In the face of health economics, it needs to but also midwifery care approaches differently to what obstetricians do. And there is a big room for women being cared for by midwives as opposed to obstetricians when they are not needed. (Midwife 7)

Although medical model was highly trusted by the women interviewed in terms of safety and covering unexpected childbirth risks, some participants from both groups of women and health professionals commented on “patients’” lack of empowerment or control in this model of care. When women do not have a certain degree of control in their maternity care, they may feel a lack of confidence in their own body and how to care for their own baby.

The only lack is a lack of privacy or a lack of confidence in a mother to know her own body and how to care for her own baby. I found the questionnaire I

had to complete before leaving hospital invasive and upsetting. I felt like I was suspected of being an unfit mother. (Survey respondent 0165)

I would prefer to be under the midwives care with no doctor or obstetrician present for the birth unless needed. I have had the obstetricians interfere when it was not needed. They also undermine both mothers' and midwives' intuition, causing worry and lack of confidence in the mother. (Survey respondent 0165)

According to some health professionals, women often wish to be listened to by their health care providers and to be empowered in their own care. However, one child and family health nurse in a rural community observed that there was a communication issue between rural women and their health care providers.

Women expect to be active participants in their birthing experience and expect to have their wishes considered. The main criticism I hear from women about maternity services is where there has been a breakdown in communication. There was probably a higher expectation of being able to get more of a rest when postnatal women returned to [name of the local hospital] for a few days. However, this service ceased several years ago due to insufficient midwives available to be rostered on for all shifts. (Child and Family Health Nurse 2)

One participant wondered why she could not be involved in choosing her caregiver for her fourth child since she had already had three children and had not had any previous problems. Consequently, as she was living in a rural area, she had to travel a long distance for each doctor's visit.

I have had four children. When I had my second and third, I was able to alternate visits with local my GP and the obstetrician. When I had the fourth, I was 35 years old and classified as "old" and was unable to alternate visits and had to travel an hour and a half for every doctor visit. All four pregnancies have been 100% problem free. (Survey respondent 0144)

One interview participant in this study had experienced a planned home birth. She described her homebirth experience as: 'absolutely amazing, the best'. She stated that she did not want to birth in the hospital due to the lack of empowerment:

I desperately did not want a birth in a horrible stainless steel room filled with equipment and male doctors and medicalised nurses who did not share my enthusiasm for a natural and private birth. (Woman 1)

This participant wanted to be in control and empowered of her own birthing experience which the medical model of care could not fully provide her.

I had a choice, but it was essential that I was able to 'really know' what I was trying to achieve. Had I gone into the situation without my tenacity, I would, without doubt have been railroaded into a medicalised approach and would have birthed in the high risk section. I ended up choosing for myself; I took a risk and birthed at home. (Woman 1)

The same participant expressed her view that if a woman wants to be empowered in childbirth she should be responsible for their care and cannot put all trust into the health professionals.

One needs to be informed. One cannot put all trust into the midwife – for me there is a sense of 'displaced responsibility' in our culture. We want someone else to do everything for us – and then we blame them when things go wrong. (Woman 1)

One of the important findings from the interviews and comments from the survey respondents is that women expressed their wish to be involved in decision making regarding their care and to be listened to and respected by their caregivers. One participant expressed her disappointment about her childbirth experience:

I had contractions for five days and went up to the hospital each day. They sent me home each time because I still had five days to go and was not dilated (the reason I had to have C-sections). On the fifth day my baby's heart rate was going from 190 down to 45, so therefore I was in theatre

within 15 minutes. Because they are so busy they forget that a mother (not first time) knows her body. I have now joined private health so I would never have to have another baby there again. (Woman 17)

Trying to maintain a sense of control in the process is very important for birthing women. One participant in this study said that the hospital was keen to intervene early and she wanted to know why they should rush into inductions. In the end she was glad that they waited as long as they did, but also glad they moved on when it was necessary.

I would have preferred to have had more control over the induction – e.g. be allowed to ‘up the level’ of the syntocinon myself, under supervision of course, rather than have a grumpy midwife do it smirking each time. Trying to maintain a sense of control in the process was very important to me (and may well impact on postnatal depression rates), and with most of my preferences going out the window fairly early I would have appreciated some consideration / creativity in this regard. (Woman 4)

One respondent from the survey noted that the delivering midwife did not listen and respect her wish regarding birthing position. It became a battle which wasted the little energy she had.

I wish that health care professionals listened to their patients. With my last labour I was adamant I wanted to be on all fours (having previously tried on my back and found it awful). The midwife had not delivered this way before and constantly tried to change my mind. It became a battle which wasted what little energy I had. (Survey respondent 005)

When a labouring woman's wish is not respected or listened to, it often turns into a difficult situation. One participant said that she had to argue with the midwife to get the pain relief after it was initially refused.

Yes, but pain relief was initially refused (I was induced and it was very painful once labour had actually commenced) and had to argue with the midwife to get the pain relief. (Woman 2)

When a woman is allowed to have a greater degree of control in the birthing process, she may have a positive childbirth experience such as one of the participants in our study. Although one of our interviewed participants had diabetes, she convinced the hospital that she was diet controlled and should be allowed to give birth in the birth centre. Because she always wanted a lovely birth, she ended up choosing to give birth in her own home. It was scary for her but because she had done a lot of reading about the birthing process and diabetes, she maintained her control and had a successful birth in her own home.

I knew what to do and to be allowed the privacy to just do it, with only my partner with me was a gift I will always treasure. I was a little nervous when her head came out and she started crying at the top of her lungs – before her body came out. That felt a little scary, but I was able – even in my state – to decide that that was ok. And anyway, the circumstance changed with the next contraction. It was an amazing experience. I had thought to have the baby in the bath as my second child was a water birth, but I was being cautious until the midwife arrived and so stayed in my bed – which was perfect. (Woman 1)

5.9.3. Lack of customisation for different groups in medical model

Data from the interviews with women reveal that the medical model of care lacked customisation for different groups of consumers. Both younger and older groups of women in the study felt that they were not catered for by the medical model. One younger mother noticed the absence of support for her when she chose to have a baby earlier in her life:

Absolutely horrendous, the other mothers looked down their noses at me like I was filth because I chose to have my children earlier in life and the midwife

running the course wasn't much better than the other expectant mums. I only went to two classes because of this. (Woman 8)

The older mother also felt that she did not get suitable support for her age group.

There was also a noticeable absence of support groups for older first time mums – all geared around young mums. (Woman 9)

5.9.4. Lack of support for planned home birth

Some interviewed and surveyed women wanted to have a home birth but there was not a midwife available. This might be due to the shortages of health professionals and lack of support from the Government for planned home birth model of care in Australia.

By far it was my preference. I wanted to have my second child at home but there was no midwife available, and my husband did not have the confidence to play midwife on his own. (Woman 11)

In another case the survey respondent said she planned a home birth, but it did not happen because of the complications:

I planned a home birth, but the midwife refused to attend labour at home due to perceived complications near the end of my pregnancy. I will plan a home birth next time; I am not willing to birth my baby anywhere, unless under known dangerous pre-existing conditions, in which case I will move closer to a hospital before the date. (Survey respondent 175)

In another case, one survey respondent also noted that there was a lack of support for home births. She would have had childbirth at home as she explained:

I had both my healthy babies when over 40 years old. With midwife support I would have had them at home (but none was available at home). Both natural deliveries with less than 3 hours labour. The worst part of the experience was the hospital scene. (Survey respondent 170)

5.9.5. Factors affecting women's preferences on the model of care

5.9.5.1. Distance from hospital

Travel distance is one of the factors which affect women's preference in choosing the model of care. Many women in the interviews were aware of the lack of medical staff and facilities in their local hospital due to the current constraints of the health care system. Moreover, they were also aware of the chance of unpredicted situations in childbirth. Therefore, these women were willing to travel a long distance to a fully equipped hospital for safe delivery. This supports the results of the survey on travel time for safe delivery reporting that nearly 60% of the respondents said that they would be willing to travel for less than an hour by car to be confident of a safe delivery. About 25% reported that they were willing to drive for one to two hours to a safe delivery place would be fine for them (see section 4.4.1). Moreover, the statistical tests have discovered that women tend to prefer the travel time which is similar to what they experienced in the past (see section 4.5.6.1)

I however would not even consider home birth because if anything was to go wrong the nearest maternity unit is a 2 hour drive away (4 hours return). (Woman 13)

In my opinion not where I live as it is 80kms to the major hospital where there is an obstetrician on call. (Woman 12)

I guess the deciding factor for my husband and I was being quite isolated and the thought of not being able to make it to a hospital in case of an emergency was quite scary for both of us. (Woman 18)

5.9.5.2. Type of delivery

As reported in the last chapter, the survey results indicated that there was a relationship between participants' type of delivery and their preferred model of care (see section 4.5.2.1). It has been found that women who had had vaginal delivery preferred conventional care and midwife-led care equally. Those women who had had caesarean delivery tended to choose conventional care as their

preferred model of care. These findings are consistent with the interview results. Many women in this study had experienced difficulties in childbirth and had had caesarean delivery and tended to choose the conventional care model. It seems true to say that what people have experienced in the past will affect their decision about their care in the future.

As my birth was an emergency caesarean, I am glad I was at the hospital. But for people who have had no complications in previous births and are only a very short distance from a hospital I think it is ok. (Woman 15)

It is up to the individual and their view, personally I wouldn't take the risk but I have had two emergency C sections. (Woman 8)

5.9.5.3. Planned home birth model of care

Results of the data analysis reported in the previous section presented women's views on models of care including the medical model of care and planned home birth. The factors that affected women's views on this issue were their trust in the medical model, their distance from hospital and their previous childbirth experience. In the sub section below, planned homebirths are revisited but through the views of health providers including midwives, obstetricians and child and family health nurses. The six main categories that emerged from the interviews are (i) women's choice; (ii) cost effectiveness; (iii) free births; (iv) unexpected complications in childbirth; (v) birth centres – an alternative to home birth; (vi) differences in training and philosophy between midwives and obstetricians.

5.9.5.4. Women's choice

Women's choice is the primary reason that health professionals in this study support home births. They believe that planned home births should be an option for women and described home births as "an individual choice", "women's choice", "a woman's right".

It comes back to women's choice. For low-risk women, there is no reason why they shouldn't have the choice of home birth if they have a provision of

skilled midwives with them who can help them and detect if things are going pear shaped and certainly refer it on. (Midwife 5)

Importantly, health professionals emphasised that home birth should be an option only with trained midwives and a good backup system to deal with any unexpected emergencies.

Home birth is a great option for many women with many advantages to the women and their babies. There needs to be a midwife available and access to suitable emergency facilities. (Midwife 2)

However, the participants noted that although a woman has the right to choose the place to give birth, many midwives themselves are not willing to provide home birth services for women.

I have no objection to planned home births but I would not like to be the midwife in attendance. (Child and Family Health Nurse 5)

5.9.5.5. Cost effectiveness

Cost effectiveness of home birth is another reason given by the practitioners who advocate this model of care. They see home birth as an alternative care model to hospital care that costs less to the community. It is noted that at present women bear all the cost of hiring private midwives to assist them in planned home births if they choose this model of care.

A home birth would cost less to the community if it has been adequately screened and can be really effective. (Midwife 6)

Moreover, these health professionals believe that if home births are available and supported by the Government it would take the pressure off the hospital system.

Planned home births should be available for those who want it with properly trained health professionals and they should be able to be covered by Medicare. That would take the pressure off the system which is struggling. (Midwife 7)

Furthermore, according to other health professionals, a home birth model of care would relieve the load on hospitals and GP systems.

[Home births] would relieve the load on the hospital system and the GPs system. This year our antenatal clinics have been really full and well over time because we have to see more and more women and some of those women could have been looked after by midwives out in the community. (Midwife 4)

5.9.5.6. Free births

Free birth refers to a birth at home without any help from health professionals. Home birth supporters argue that if home births are not supported, free births could occur.

Women are actually opting not to have any care to give birth a baby at home without adequate professional backup. For women at the moment, it is the financial burden. To opt to employ private midwives, they have to pay privately and that has to do with insurance all sorts of things. (Midwife 5)

In addition, they recalled and expressed their concerns for the safety of women and babies in free births.

Women have been doing it for centuries, having babies born at home, but when you look in the cemeteries hundreds years ago, there were a lot of ladies and babies who died in childbirth. But whether that was because they did not have professional care at home, whether they were left to do it by themselves. So it is just an area I feel a bit nervous about I guess. (Midwife 7)

5.9.5.7. Differences in training and philosophy between midwives and obstetricians

This theme explains why health professionals have different views on the issue of home birth. Some health professionals believe that there is a gap between midwifery and obstetric care in providing maternity health care for women. They explained that the differences between those two professions are the different

approaches in training. Midwives are trained to look after normal deliveries and not everyone needs medical intervention. However, because the health system has adopted the medical model, when a woman comes into the hospital, she becomes a patient of the hospital and the medical side of the hospital feels the need to be involved. One health professional shared her experience as a midwife in a labour ward when she had trouble discouraging doctors from intervening when it was not necessary.

We just can sit back and watch the lady for a while and get to know whether she is actually in labour or not without having to intervene and do a certain test. Doctors need to do that because that is how they find out information. That is different perspective on things. (Midwife 5)

The midwives in this study agreed that what doctors or obstetricians were doing is not wrong. However, they believe that childbirth is a normal process and there should not be an intervention when it is not needed.

It is not a wrong way they are doing it but for those who are normal, childbirth is a normal process and if you are in the middle of nowhere, you just get on with it and have a baby. (Midwife 3)

In fact, the midwives appreciated what the obstetricians had been doing to save women's lives in complicated births.

You need them [obstetricians]. We do not have women die from childbirth anymore because we have got areas that have access to caesareans so they do not get let in labour for three days regardless of what happening which is horrible. (Midwife 7)

5.9.5.8. Birth centres – an alternative to home birth

This theme emerged during the interviews with the health professionals on home birth issues. Birth centres have been seen by some health professionals in this study as a favourable alternative to home birth due to their easy access to hospital facilities.

... We can make a place look like home, it is not in the hospital, but near/completely separated from the hospital. They are places where the patient feels like at home like a birthing centre but not attached to the hospital. This place would be 500 metres or even a kilometre from the hospital but within easy access to the hospital. (Obstetrician 2)

In addition, birth centres are seen as a better option than home birth because they may offer more spaces and better facilities than homes:

Some women do not want to have a baby at home for physical reasons because it is difficult, it is messy. Birth centres might have more spaces and facilities; so for those women that probably is a good option. (Midwife 6)

It was explained that private midwives from the stand-alone birth centres can only come to the hospital in a support role when a woman is transferred to hospital. Some health professionals believe that these birth centres would work better if the hospital were to support and staff them.

A birth centre supported by a hospital would work. If we've got the hospital staff staffing it and the hospital is agreeable to it, all will work. (Midwife 4)

5.9.6. Maternity units without caesarean: are they a safe and sustainable model of care in rural areas?

The data analysis from the interviews with health professionals has revealed different opinions on this mode of intrapartum care.

5.9.6.1. Ensuring safety

Health professionals in the study only supported this model of care providing that those units had appropriately trained medical staff and good backup systems to deal with unexpected emergency situations.

Yes, absolutely providing that they have got appropriately trained staff and good backup and emergency care or ambulance care, good protocol for transferring people out of there if things are not looking so good. (Midwife 7)

Scottsdale, which is the central town of Tasmania's North East region and is located 63km from the major hospital in the north, is referred to by many health professionals as providing maternity services without caesarean section. According to our participants, midwives are able to work alongside GPs to provide care for low-risk women in rural areas without caesarean delivery support. However, they could only see very few places in Tasmania providing that level of care for women.

... The GPs look after women and do normal deliveries. They only see low-risk women; anything that is high risk comes in here (the major hospital). But as long as the GPs are willing to do it and we are trained to do it. Midwives are always able to deliver a normal low-risk woman. They closed everything [else] down. So people do not have their option. (Midwife 5)

A health professional who works at the local hospital at Scottsdale explained how the small maternity unit in her area worked without caesarean delivery support.

... Any complications or lack of progress in labour is identified early to allow for the woman to be transported to the Launceston General Hospital where more specialised care is available should this be required. (Midwife 3)

5.9.6.2. Sustainability concern

The health professionals who support this model of care are aware of the current health system constraints and often express concern about the sustainability of this model in terms of the workforce, cost and quality. They have concerns over staffing, equipment and how to run a maternity unit with only midwives and GPs and how to make sure the unit meets the required standard.

Possibly, but I am not sure how sustainable this is. For example, maintaining rosters with midwives on each shift. What happens with short notice sick leave, and can annual leave be covered? How well will the midwives be supported with specific professional development opportunities? What access will these women have to obstetricians and paediatricians? How well will equipment be maintained? How will changes in practice be communicated and standards of care audited? Will the local GPs be the

*admitting doctor and if so, how will this sit with their professional indemnity?
Many questions – and no doubt more if I think a little longer! (Child and
Family Health Nurse 2)*

5.9.6.3. Safety and quality concern

Although there are some health professionals who support small maternity units without caesarean delivery capabilities, many do not advocate this model because of safety reasons. Even though they seem to support this model of care, they still stress that a low-risk woman does not mean 'no' risk.

I think so, as long as she has all the routine screens done so we know she is low-risk. However, it does not mean she does not have any risk. (Midwife 6)

Many health professionals in the study oppose home births because of childbirth risks. The longer they work, the more they are aware of unexpected situations that any woman could have during childbirth.

I have worked as a midwife in Tasmania for 40 years and I am well aware that even what seems to be a normal birth can go wrong in some cases. (Midwife 9)

Furthermore, when unexpected situations occur in childbirth, they often happen very quickly. The health professionals described those situations as "how quickly a situation can deteriorate" and "things can go wrong very quickly". In these emergency circumstances, "time is very important", "time is critical" to save the mothers' and the babies' lives.

The time taken to get to a hospital in an emergency is critical. A baby could die while in transit or a woman could die from blood loss. (Midwife 1)

For these reasons, some participants have strong views against planned home birth because of the danger to mothers and their babies.

I strongly oppose home births because of the unpredictability in obstetrics. Statistical numbers are supporting my opinion. Chances of dying in a home

birth are 6 times higher than a hospital and that's significantly higher.
(Obstetrician 3)

It is noticeable that many health professionals would not choose to have their own babies born at home. This is because being experienced health care providers, they are well aware of unexpected situations in childbirth.

I am not a home birth fan even though I am a midwife but I do not have a problem with someone else if that is their choice with an appropriate care. But home birth is not something that I would choose. (Midwife 7)

Another practitioner sees great potential for a small, suitably staffed rural maternity unit but not without caesarean delivery capabilities. According to most of the participants, the need for a caesarean section can happen without warning and therefore a small unit should have the facilities and staff to cope with it.

Women give birth in all sorts of places - a small suitably staffed rural maternity unit sounds great. I think every small rural maternity unit should have the facilities and staff to cope with a caesarean section, as the need for a section can happen without warning. (Midwife 6)

In order to ensure the safety of mothers and babies, it is suggested that women should always give birth in a unit with obstetric services.

80% of births could go very smoothly but there is always the unexpected. If a woman is going to give birth, there should always be a facility for caesarean section. (Obstetrician 2)

Furthermore, some health professionals who do not support small maternity units without caesarean section capabilities concern about the quality and safety of services. They have seen women frequently left with adverse outcomes in these units.

Hospitals in areas such as [name of rural town] and [name of rural town] provide care but it's not sufficient and this can unfortunately lead to

substandard care. We had a case several days ago when a woman came in after delivery, bleeding since 9am and she came around 7pm, and she was bleeding for 10 hours. I would say this is substandard care. And we see this once every few months, not once a year. So things like bleeding can be a problem for local hospitals probably due to lack of many deliveries and lack of proper training. (Obstetrician 3)

5.10. Health care system constraints

The health care system constraints theme is grounded in the qualitative data of the study and explained in the sections below.

5.10.1. Work force shortages

Some health professionals in rural areas expressed that their community needed midwives to provide care for pregnant women along with their GPs. Those health professionals questioned why a few decades ago women were able to give birth with the assistance of an obstetrician and a midwife in their local hospital. Now these services have gone, leaving women with only some services, if any. As a consequence of the loss of services in rural areas, health professionals in urban areas who now had to cope with increased numbers of patients from rural areas often felt overloaded and stressed. They noted that the current system was struggling with more demand for services but with a limited number of doctors.

How to improve maternity service? Employ more doctors because we are overworked and there is a shortage of staff. This week I'm on call Friday to Monday and I'll be responsible for caring for this part of Tasmania for 36 hours. If we had more doctors it would give us reasonable hours and we wouldn't be under so much stress. It's a struggle with so few doctors. (Obstetrician 3)

Another expressed concern that the ageing workforce had been impacting on the shortages of health professionals. There are more midwives approaching

retirement age than newly graduated midwives who in turn may not wish to stay in the profession long term.

We need more midwives, I think we need really to get back to the core of how we are training our midwives and most midwives we have seen are in their forties or fifties. We are having people come through and looking at maybe half a dozen graduates in our hospital. Naturally, some are having babies themselves and moving off their career path. They are moving up to the mainland and then going outback and whatever which is great. On the other hand we are having midwives who are retiring or coming to the end of their career path ways. So we can do much better in promoting being a midwife. (Midwife 5)

Not only the health providers but also the health care consumers clearly saw the shortages of health workforce in the current health care system especially in rural areas.

There is a lack of nurses in rural areas. There are constraints with providing midwifery training to rural staff. Staff are moving on and locals are losing skilled staff. (Survey respondent 109)

As a result, although many women in both the interviews and survey believed that it was important to have a complete maternity unit in their local hospital, they were often concerned about its feasibility due to a lack of qualified midwives.

Births available at our local hospital would be fantastic, but due to a lack of qualified midwives this could be a long way off. (Survey respondent 181)

5.10.2. Cost constraint

Many health professionals in the study emphasised that funding and resources played an important role in improving services for expecting mothers, especially those in rural areas. Outreach maternity clinics would certainly save women from travelling out of their community and therefore they could avoid the difficulties and some of the risks as discussed earlier. In terms of rural maternity services, some

professionals talked about outreach maternity clinics, which allow medical staff and midwives to visit rural areas on a regular basis. According to them, this model had been trialled in one area in Tasmania and it was well appreciated by women. However, it was a big strain on resources because of the small number of births in rural areas.

Outreach maternity clinics have been discussed before and have been trialled in one area on the East Coast. It worked quite well from the ladies' points of view but it is a huge drain on resources. There were two medical staff and two midwives who went in the Government car or two Government cars to see a dozen patients. It is a big use of resources where those four people in hospital could have seen four times as many patients. (Midwife 7)

Due to the cost constraint, outreach maternity clinics were currently being considered, according to our health professional, but only as midwifery led outreach clinics without the support of medical staff.

... Outreach maternity clinics are up for discussion again at the moment, but just midwifery led outreach clinics without the medical staff going to areas where we have regional hospitals that do outreach clinics to see low-risk women. Scottsdale has their own midwives and GPs to care for them, but places like Beaconsfield and George Town have hospitals but they do not have midwives necessarily on staff. (Midwife 7)

Funding is not only very important in improving services in rural areas but also in the major hospitals. Some health professionals in the study suggested that if they had more funding or resources available they could have a bigger maternity unit and provide more midwifery-led clinics for low-risk and even some high risk women.

If we have more money and a bigger unit and we could do a lot more midwifery-led clinics for low risk even some high risk patients. I mean something that is classified high risk we are quite capable of looking after on a routine basis and with medical backup. So we could do a lot more midwifery led care if we have adequate resources. (Midwife 7)

5.10.3. Health care system and continuity of care

In terms of quality of care, as discussed in section 5.4, although both health care providers and consumers (women) recognised the benefits of having continuity or consistency of carers, both sides were often sceptical about its possibility in the current health care system.

I wanted this for continuity both with regards physical and mental health care, but it wasn't actually possible. We aimed for natural birth, and felt continuity with the usual carer the best aid to achieving this. (Woman 4)

Other women added:

It's nice, but the system of several birthing midwives being available all the way through made it a bit like a lottery of who will be there on the day. Be better if you could choose, but difficult to make them available for a long birth. (Woman 1)

It is important to have one main carer who is responsible for your maternity care but probably very impractical. (Survey respondent 0127)

According to the some health professionals, continuity of care was increasingly difficult to offer because it is impossible for one person to be available 24 hours a day 7 days a week. However, hospitals tried to make sure that women had seen the same group of caregivers or visited the same practice where the information was shared, so that expecting mothers were likely to meet the person who would assist them in labour at least once or twice.

I think continuity in that sense is not possible in our current system and it should not be provided because it is unsafe. But within our system we are ensuring that the person has seen the same group or the same practice where the information is shared and they are likely to meet the person once or twice. That's something which we should be able to provide and that can be done. (Obstetrician 1)

One child and family health nurse who worked outside the hospital perceived that a team of midwives would provide women some degree of continuity of care during pregnancy and childbirth. However, she believed that in the postnatal period there was little opportunity for continuity of care due to an emphasis on early discharge from hospital:

I understand the “team midwife” concept has been successful. This certainly was designed to provide some degree of continuity of care. Postnatally, it seems there is such an emphasis on early discharge, that there is little opportunity for continuity of care. (Child and Family Health Nurse 2)

However, a midwife who worked in the hospital system commented that even with the team midwifery program, which theoretically was supposed to provide continuity of care for women, it was still difficult in practice as she explained:

We do have a team midwifery program which offers a continuity of care. They see them antenatally and technically they are supposed to see them in labour and then follow up postnatally. That does not happen due to staffing; people need their leave or they are off sick or they need a day off so therefore with staffing they are not replaced. The staff lifestyle is changed and therefore it makes it a lot more difficult to offer that continuity of care across the board. Ideally, it would be great, but you’ve got to have people who are willing to do it. But I do not think across the board that we can have that mode of care. (Midwife 4)

Another health professional added that providing continuity of care in public hospitals did not work and in her opinion it would hardly change due to the nature of the health care system.

I don’t think it is possible in the public medical system. It does not work and I can’t see that will ever change because of the nature of the public hospital system. (Midwife 7)

5.11. Summary and conclusion

The data analysis of the interviews with both groups of health care providers and the women who are consumers of maternity care and the qualitative data from the survey with women has revealed a set of issues relating to the maternity care system and rural women's needs in maternity care. Firstly, there is a major lack of maternity services in rural areas. As a consequence, rural women face many challenges in order to access care including financial burden, risk of having inadequate care and social disruption. The study findings have indicated rural women's needs in many aspects of maternity services. They wanted to receive antenatal care and postnatal services in their local communities. In addition, there is some evidence from the study that rural maternity services played a role in the sustainability of rural communities. Thus, many women expressed their preference to have birthing services in their local area. However, both women and health care professionals were aware of the constraints of the health care system including workforce shortages and cost constraints.

Secondly, in terms of the quality of maternity care, the results from the interviews with women have strengthened the findings from the survey that many women supported continuity of care because having continuity of care would help them build a relationship with carers, stop them feeling they were "just someone's job" and enable them to be more in control. However, both the health professionals and women believed that continuity of care was impractical in the public hospital system. Both health providers and consumers emphasised that given a choice of only one or the other, they preferred quality of care rather than continuity of caregiver.

Thirdly, the data analysis demonstrated that not all women in the study were aware of the services that they were entitled to, such as scheduled scans, tests, the existence of birth centres and home visits. Furthermore, they were not sufficiently informed about health and services including private midwifery services and lactation services. With regard to choices in maternity care, it has been found that participants with a higher level of education, with better resources or with private

health insurance, were likely to obtain more choices in maternity care. Fourthly, the findings of the study have found that rural women needed more support in infant feeding and in the postnatal period such as community support.

Finally, in terms of models of care, the majority of women had trust in medical model of care because they felt safer and the childbirth risk is minimised by this model. However, it has been found from the study that women experienced lack of control and empowerment within this model of care. In addition, some interviewed women wanted to have a planned home birth in order to achieve a natural and private birth. However, they claimed that there was a lack of support for planned home births. The factors which affect women's preferences on the model of care were distance from hospital and their delivery type. The data have revealed different opinions among health professionals on planned home births. Home birth supporters believe that women have the right to choose the place to give birth and home birth is more cost effective than hospital birth. Moreover, they think that if home birth is not supported, risky free births would increase. Home birth opponents, on the other hand, emphasise that unexpected situations occur in childbirth and therefore women should give birth where they can readily access medical help if needed. Although many women in the study preferred to have a maternity unit in their local hospital, they were aware of the health care system constraints. Maternity units without caesarean section could be a model of care to meet their preference and reduce the constraints of the health care system. However, most of health professionals in this study noted that the need for a caesarean section can happen without warning. In addition, this model of care is supposed to provide care for low-risk women but according to our participants, changes in women's risk status can also happen anytime. There are also concerns on the sustainability, safety and quality of this model.

Chapter 6: Discussion on Quantitative and Qualitative Results

6.1. Introduction

The following discussion brings together the qualitative and quantitative results from the last two chapters, aiming to highlight the needs of rural women in maternity care. Concurrently, this chapter considers how these findings relate to the existing body of knowledge in the literature. This chapter also provides a detailed picture of Tasmanian rural women's needs and preferences in the light of that literature.

Chapters 4 and 5 have presented the quantitative and qualitative results of the study. These results have been addressed to the three main research questions of this research which are:

- RQ1: What are the maternity needs of women in rural Tasmania?
- RQ2: What are the current maternity services for rural women in Tasmania?
- RQ3: What are gaps between the women's needs and the services delivered?

As stated in the previous chapters these research questions were developed in order to achieve the main aim of the study, which is to identify gaps or unmet needs between rural Tasmanian women's needs and available services. Identifying these gaps will give insightful information and recommendations for policy makers and other stakeholders, to improve maternity services for women and families in rural Tasmania in terms of access and social wellbeing impacts. This chapter will discuss these needs in conjunction with the research questions and aims of the study. Women's needs in maternity care in rural Tasmania are presented in six major themes, namely access needs, safety needs, small rural birthing services, information needs, support needs and needs for quality services.

6.2. Women's needs in maternity care

6.2.1. Access needs

This study has identified a major lack in maternity services in rural areas in Tasmania as evidenced by the absence of many important services for women and families. The women interviewed, health professionals and many survey respondents in our study expressed strong needs for access to many services in their local communities. In particular, women and health professionals want to have antenatal classes, antenatal checkups, birthing services, postnatal care and home visits by midwives available in their local communities. Further, although child and family health services are the only services available in most rural communities, participants in our study still spoke of a strong desire to have greater access to these services. Therefore, these findings strongly indicate that women's access needs in maternity care are not being met in the current situation in many rural areas in Tasmania.

When the needs for access to maternity care in the local community are not met, women and families have to face many difficulties in order to gain maternity care access in a distant centre. Firstly, research has found that women who gave birth outside their communities incurred financial costs to meet their access needs (Dietsch, et al., 2010; Kornelsen & Grzybowski, 2005; Roach & Downes, 2007). These included travel expenses, accommodation and food expenses, child care costs, ambulance costs and partner's lost income. It is more challenging for women to receive care outside their communities when they had no immediate access to transportation or no driver's license. Our study supports these findings. The results from the last two chapters demonstrate that financial consequences of giving birth outside the community were incurred by all women, however most seriously by women with limited financial and social resources. As Dietsch and colleagues (2010, p. 3) point out:

There is an erroneous assumption that all women will have access to transport. However, many women spoke of the lack of public transport in their area. Taxis, universally available in urban areas, would be

prohibitively expensive even if they were available for women in rural and remote NSW who had to travel to regional centres to birth.

As mentioned earlier in the literature review chapter, one of reasons for closing small rural maternity units is cost savings. It is assumed by hospitals, health authorities and health departments that it is cost effective to shut down rural maternity units. However, on the receiving end, closure shifts costs from the health budget to rural families and communities in the form of transport, accommodation, loss of income due to absence from a farm or other employment and spending diverted from local businesses (Rural Doctors Association of Australia, 2006). This is confirmed as other studies and this study have given useful insights into these claims. Importantly, this study found not only cost shifting at the time of giving birth as the other studies have done, but also antenatal access costs including child care and after school care costs. This is illustrated by the interviews with women as follows:

The cost of travel was pretty expensive and also trying to organise for someone to look after my other son because he doesn't travel well. (Woman 13)

Cost was a major factor and also time waiting as I had children in school I had to be home by 3pm. It didn't matter what time your appointment was you were always kept waiting over an hour. (Woman 19)

Secondly, when women have to travel to meet their access needs in a major hospital, this study found that they often encountered social disruption. This is consistent with the previous research (Kornelsen & Grzybowski, 2005) suggesting that diminished access to maternity care for rural women causes significant social disruption. Data analysis results have shown that country women felt very isolated in the unfamiliar hospital environment because they were away from their family members such as their other children and in some cases their partners.. To illustrate, some health professionals in the study observed the difficulties that rural women encountered: *"A woman can feel very isolated when there is a need to be admitted to a large medical institution and it means being separated from her*

family. This can cause her high levels of anxiety particularly if she is concerned for other children at home. (Midwife 2)". This is supported by the literature suggesting that being separated from families causes anxiety and concerns or emotional consequences to rural women (Dietsch, et al., 2010; Roach & Downes, 2007). These emotional consequences can be interpreted in the context of place literature which suggests people attach meaning to a place. Hospitals and schools are seen to hold important symbolic properties (Kearns & Joseph, 1997) and the symbolic value attached to such buildings is seen to impact upon the sense of belonging and wellbeing that individuals feel (Kearns, 1998). Rural women may attach their emotion to their usual place or communities. Thus, when they had to leave their familiar environment, it impacted upon their emotion and their wellbeing. Particularly, this study found rural women were stressed and anxious when they were away from their local communities to access maternity services including antenatal and postnatal care.

The third challenge for women in rural areas where maternity services are absent is the risk of giving birth before arriving at the major hospital. The results from our study have revealed that rural women had unplanned home births, gave birth in small rural hospital which did not provide birthing services, on the side of the road and in an ambulance on the way to the major hospital. The husband of one of our survey respondents left a comment on the return survey to express his frustration about the current services in their area, as reported in Chapter 5: "We don't have any maternity services. Why do women have to travel to Burnie to have a baby? My wife did not last 15 km and delivered on front seat of the car!" Another respondent had an unplanned homebirth: "I delivered at home on my own...as my labour and birth only lasted 15 minutes."

Dietsch and colleagues (2010) found similar results when studying childbirth experiences of women in rural New South Wales Australia who travelled to give birth in a major hospital. Women in their study not only faced the risk of giving birth en route but also the risk of dangerous road travel. Travel on rural roads is intrinsically dangerous as the condition of the roads is poor and there are few petrol

stations. In addition, mobile phone coverage is often not available on most rural roads. As one survey respondent in this study noted:

We are 1 ½ hours from hospital. [We] arrived in plenty of time for baby 1 but could not travel in car for baby 2 (quick labour and too uncomfortable sitting up and rough winding roads). So [we] waited at a local multi-purpose centre for an ambulance. [We] got to hospital and the baby born about 5 minutes later....

This study and Dietsch's study have confirmed that women in rural Australia where maternity units have been closed have been forced to leave their home communities to birth and risked the safety of themselves and their unborn babies because of the poor condition of roads. Risk of delivery in small potentially underfunded maternity units has been transfer from the health system to birthing women. Furthermore, when women's maternity access needs are not met due to the closure or absence of obstetric services in rural communities, stress, fear and anxiety resulted (Dietsch, et al., 2010; Kornelsen & Grzybowski, 2005; Kornelsen, et al., 2011; Roach & Downes, 2007). Most recent research (Kornelsen, et al., 2011) has found that women living in communities without access to local maternity services were 7.4 times more likely to experience stress and anxiety associated with remote birth compared to women in communities with local services provided by at least one specialist.

The international literature suggests that women in rural areas developed strategies to reduce the risk of travel on uncomfortable roads (Kornelsen & Grzybowski, 2005). A common strategy was the seasonal timing of birth to minimize the need for winter travel. Another way was to undergo labour at home and arrive at the local hospital with the cervix fully dilated to eliminate the possibility of transportation to a referral community. Some women even considered unassisted home birth (Kornelsen & Grzybowski, 2005). Although these strategies have not been found in this study, one survey participant in our study observed what was happening in her community as:

From what I generally see it is “call an ambulance when the baby starts to come” which is certainly sub-standard and putting ambulance in a bad position should complications occur. (Survey participant 0116)

The Rural Doctors Association of Australia (Rural Doctors Association of Australia, 2006) supports the findings of this study suggesting that ambulance services face higher costs, workloads and responsibilities, frequently without increased funds, staff or training needed to cover them. As mentioned earlier, RDAA argued that closing small rural maternity units are not cost savings in broader terms due to the cost being shifted to rural families and to ambulance services. In addition, the evidence from this study indicates that risks shift from the health care system to rural women and families.

The lack of maternity access in rural communities not only causes stress, fear and anxiety but also causes consequent adverse outcomes for mothers and babies (Kornelsen, et al., 2009; Nesbitt, et al., 1990; Sontheimer, et al., 2008). Nesbitt and colleagues (1990) suggested that negative outcomes such as complicated deliveries and prematurity may be a consequence of the increased stress both physiological and psychological associated with travel and parturition in unfamiliar settings which interfere with the normal process of labour. Moreover, rural parturient women who have to travel for care are 1.3 times more likely to undergo induction of labour than women who do not have to travel (Kornelsen, et al., 2009). Further, lack of access of rural obstetric services not only has a negative impact on the well-being of mothers but also neonates in communities. Rates of low birth-weight neonates originating from service areas of hospitals that had ceased birthing services were significantly increased compared to data before hospital obstetric closure (Sontheimer, et al., 2008). Low birth weight infants may also be at increased risk for morbidity, mortality and negative impacts on long-term quality of life.

In summary the study has found current maternity services in rural areas in Tasmania fall a long way short of meeting women's access needs. When access needs are not met, women and families face many challenges in order to meet their access needs. Firstly, they have the financial burden including travel expenses,

accommodation and food to get antenatal, obstetric and postnatal care in a distant centre. Secondly, they often face social disruption because they are away from their social network and separate from their family members to give birth in unfamiliar hospital. Thirdly, women face the risk of giving birth before arriving at the major hospital. As a consequence of these challenges, women experience stress, fear and anxiety. These negative feelings have been linked with adverse outcomes for mothers and babies.

6.2.2. Safety needs

Participants in this study indicated their views of safety needs in maternity care. These needs were evidenced in the findings from the interviews with women and health professionals. Many participants from both sample groups of women and health professionals perceived that there was a risk of having an unexpected emergency situation in childbirth even though it did not happen often. Thus, properly trained medical staff, good back up and ready access to a hospital system should be in place in order to ensure safety and protect women and unborn babies from adverse outcomes of childbirth. This is consistent with the previous research suggesting that safety is an important factor in women's needs in maternity care (Kornelsen & Grzybowski, 2005; Smith & Askew, 2006). An Australian study (Smith & Askew, 2006) investigating factors that influenced rural women's choice of place of birth in a rural town of Queensland has found that the most frequently mentioned factor by the participants was the safety of themselves and their baby. However, the same study reported that the requirements for safety varied among individuals, depending on their susceptibility to threat, their risk tolerance and their personal characteristics. In particular, women with a low risk tolerance were more likely to deliver in a major hospital where they can access medical help anytime. Furthermore, in that study participants who had had an adverse experience with a previous birth were more likely to travel away from their rural town to deliver. This is supported by our interviews and survey results suggesting that women who had experienced complications in childbirth before were more likely to choose to give birth in hospital settings with medical backup. Interestingly, Smith and Askew (2006) also found that participants who had a medical background or worked in the

local hospital tended not to deliver in their community hospital. This was because those participants were aware of both the risks associated with labour and the limitations of the local obstetric services. These findings once again emphasise the importance of safety in childbirth that has been perceived by majority of women and health professionals in studies including our study.

In addition, our survey results on preferred models of intrapartum care have also highlighted the safety needs of rural women. Half of women studied preferred to give birth in hospital settings with ready access to medical help if needed although they would be required to travel up to 2 hours. A midwife-led model of care with one hour travel involved was the second most preferred model of care among respondents (almost 40%). Less than 9% of women would choose to have a planned home birth, despite not having to travel. Pitchforth's (2008) findings are similar to this study suggesting that women had an overwhelming preference for hospital care as opposed to home birth and indicated their willingness to travel up to 2 hours for a safe delivery.

The results regarding the participants' willingness to travel to safe delivery appears to contrast with the findings on the preferred models of care as over 50% of the respondents said that they would be willing to travel for less than an hour drive to a safe delivery unit. These findings suggest that women want to give birth in an adequately equipped hospital but they have to weigh up this option with the time taken to travel to that place and difficulties associated with travel. These results indicate that women have to trade-off between access to services and considerations of safety. This is validated by the interview results showing that many women did not choose to give birth at home with the assistance of a midwife despite that model meaning they would not have to travel. The choices they made were due to safety reasons, their risk status and distance from their home to the major hospital. These women were willing to travel but within limits to assure their safety rather than forgoing safety giving birth at home. The combined results from the study indicated that women in rural areas gave considerable weight to the safety of themselves and their newborns. These findings support the previous studies showing that safety is an important factor in women's decision on place of

birth (Kornelsen & Grzybowski, 2005; Smith & Askew, 2006) and that women want to deliver in a fully serviced hospital (Pitchforth, et al., 2008; Smith et al., 2004). These results have important implications for service design and provision of maternity services. Thus, the health system should design and provide services which are within acceptable and safe distance from their communities to the major hospitals as well as response to women's preferences on the models of care.

Findings about factors that influenced the women's preferences on the models of care and the travel time to the closest maternity unit presented interesting results. The statistical tests in this study have demonstrated that respondents' travel time to the nearest maternity unit when they had the most recent babies, had an influence on their view on travel time for safe delivery. In particular, if women travelled for two hours to the nearest maternity unit to deliver last time, they tended to choose the option which was similar with what they experienced in the past, e.g. they would be willing to travel for 2 hours for a safe delivery. Women tended to choose the system of care which matches their experience in the past (Hundley & Ryan, 2004; Pitchforth, et al., 2008; Salkeld, Ryan, & Short, 2000). Our study supports the claim that rural women formed their views through experience and framed them realistically within current service provision and their rurality context (Pitchforth, et al., 2008).

On the health provision side, health professionals in this study all emphasised the importance of protecting women and their babies from the risks of pregnancy and childbirth. However, health professionals had different views on the planned home birth model of care. Data analysis indicates that home birth supporters believe that women have the right to choose the place to give birth provided it is safe. This is supported by Policy for Planned Birth at Home in South Australia stating that woman's wishes for childbirth should be respected within the framework of safety and clinical guidelines (Department of Health, 2007b). Furthermore, Hendrix and colleagues (2009) suggest that health care professionals must acknowledge that women value and deserve autonomy of choice, but such choice is only valid if it is properly informed. It follows that informing expectant mothers with appropriate information on all available choices is very important in assisting women to make

informed decisions as to where to give birth to their babies. Moreover, home birth supporters raise concerns about the safety of the mothers and the babies when women choose to give birth without the assistance of any health professionals which may happen if home birth is not funded and supported. Dahlen et al. (2011) claim that the rise in the number of women choosing free birth in Australia is in part a symptom and consequence of a broken maternity care system which does not support home births and excludes them from Medicare funding.

There is a common perception that home births may help decrease the costs of maternity care among low risk women (Spitzer, 1995). Our health professionals who support home birth also think that home birth is more cost effective than hospital birth for low-risk women. The literature (Anderson & Anderson, 1999; Henderson & Mugford, 1997) indicates that an average uncomplicated birth costs less in a home than in a hospital because health service resource use is less in home births than in hospital births. However, given the workforce shortage in Australia, home birth would be constraining factors and affect the cost effectiveness of homebirth because the health professionals who provide home births can only provide care for a limited number of women while the same health professionals can provide care for many women in a hospital setting.

Home birth opponents in this study suggest that they oppose to home births because complications happen in childbirth regardless of women being classified as low risk. It has been found that 55% of pregnancies ending in perinatal death have no identifiable risk factors at the beginning of pregnancy and 28% have no risk factors identifiable at the onset of labour (Högberg, Wall, & Wiklund, 1990). Furthermore, one of the conditions that apply to women who want to have a home birth is their home should not be more than 30 minutes in travelling time to a support health unit (Department of Health, 2007b). Yet an Australia wide study (Bastian, Keirse, & Lancaster, 1998) on home birth finds that time in transit, when known, is less than 30 minutes for all perinatal deaths.

The study findings suggest that the differences between the views of health professionals on the same issue of home birth are due to the differences in

philosophy between midwives and obstetricians. Midwives are influenced by feminist theorising which focuses on natural births and controlling over the human body (Kubasek, 1997). Obstetricians are influenced by the medical model which focuses on protecting women from the earliest sign of pathology using medical support (Savage, 1986). To illustrate some health professionals in the study commented on the difference between the two professions:

Maternity care over my working life has come a long way but it has been very Americanised –obstetric led care – which is slowly changing. In the face of health economics, it needs to but also midwifery care approaches differently to what obstetricians do. And there is a big room for women being cared for by midwives as opposed to obstetricians when they are not needed.
(Midwife 7)

Although health professionals in the study have different views on home birth, there are still commonalities between the two sides. Noticeably, health professionals on both sides of the debate want to ensure the safety of the women and their babies and protect them from the risks of pregnancy and childbirth. In fact they suggest that a birth centre would be an alternative and better option than a planned home birth if a woman wishes to birth in a homely environment and under the care of midwives. This is supported by the literature suggesting that birth centres are seen as a safer, intermediate option between hospital and home birth, providing a homelike environment with access to medical care if needed (Griew, 2003).

The Report of the Maternity Services (Department of Health and Ageing, 2009) has recognised that many women prefer to be cared for by midwives, either in birthing centres or in the home setting. This is consistent with our survey results showing that the midwifery-led model of care was preferred by almost 40% of the studied women. However, the Report admitted that the access to these models is limited in Australia:

Feedback provided to the Review and other state and territory maternity reviews indicates that the demand for other models of care,

such as delivery in a birthing centre, greatly exceeds their availability. Where a range of models of care operate, they generally offer midwifery-focused models within the public sector. In the private system, options for midwifery-focused models are limited. (Department of Health and Ageing, 2009, p. 20)

This is consistent with findings from our study suggesting that access to independent midwifery services was not only limited but also not brought to the attention of women. In addition, the survey results showed the lack of choice in maternity care. It is possible that women's preference for midwifery-focused models and safety needs can be met by offering the options of birthing centres and making them easier to access. On this point our study supports the recommendations of the review of maternity services stating that:

The Review concluded that, while home birth is the preferred choice for some women, they represent a very small proportion of the total. It is clear that increased choice for women could be provided if there were greater recognition of the role that midwives can play in collaborative care models. Options should be explored for increasing the availability of birthing centre programs. (Department of Health and Ageing, 2009)

6.2.3. Small rural birthing services

The data analysis from the interviews and the survey has indicated women's preference for bringing back birthing services in small rural communities. Survey results have indicated that 77.6% of survey respondents believed that it is very important to have a maternity care unit in their local hospital and 16% considered it important. Qualitative data analysis has found that women who gave birth in their local hospital often recalled a wonderful experience of childbirth and expressed their concerns for other women who were no longer able to deliver in their own community. This was validated by our quantitative analysis results suggesting that women who gave birth some time ago were more likely to have experienced

continuity of care, to be satisfied with that care, but less likely to have had to travel to access services than women who gave birth more recently. These results may reflect that birthing services which previously existed in rural communities provided better care for women. The loss of maternity services in rural communities might also explain the less positive childbirth experience of women who gave birth more recently in a bigger hospital. This conclusion is supported by the Rural Doctors Association of Australia, which notes that:

Rural women have the right to choose birthing at hospitals in their own communities supported by their family and friends and continuity of care from their local maternity service. Robust evidence shows that small rural hospitals are safe places to give birth. Yet despite their proud record, more than 130 rural maternity units have been closed since 1995. (Rural Doctors Association of Australia, 2006, p. 1)

The health professionals in this study who have experience in providing maternity health care for rural women as well as the findings from the interviews with the women suggest that women face challenges in accessing services, disruption, stress and travel related issues. This is consistent with other studies indicating that difficulties in accessing services cause stress, fear and anxiety for rural women. These challenges cause stress, fear and anxiety (Dietsch, et al., 2010; Kornelsen & Grzybowski, 2005; Kornelsen, et al., 2011; Roach & Downes, 2007). These negative feelings have been linked with adverse outcomes for mothers and babies (Kornelsen, et al., 2009; Nesbitt, et al., 1990; Sontheimer, et al., 2008). As mentioned earlier, one of the reasons for closing small rural maternity units is cost savings. It is assumed by hospitals, health authorities and health departments that it is cost effective to shut down rural maternity units. However, findings from our study and the literature suggest that closure of these services shifts costs and risk from the health care system to rural families and communities.

In rural contexts, the model of providing small maternity units without caesarean delivery capabilities in rural communities certainly reduces the social and financial travel costs for the women and their families. Under this model of care, low-risk

women can access services in their local communities from antenatal checkups, labour and delivery services to postnatal checkups. Consequently, the difficulties associated with travel such as extra costs, disruption, anxiety, stress and risk of labouring and birthing en route would be minimised. Moreover, this model of care is likely to meet women's expectation in quality of care due to the small size of the rural hospital and likelihood of continuity of care. In a small hospital with few incidents of births, women would be less likely to have to wait for the services and more likely to have continuity of care. However, with the current availability of human resources in rural communities in Tasmania, there are concerns over the viability of this model of care such as how to ensure enough staff to cover the services in small rural communities with few incidents of births and to ensure the standard of care.

The findings of the study reveal the health professionals' concerns not only on the sustainability of small rural birthing services without caesarean capabilities but also on the safety of this model. This is supported by a UK study that found that health professionals voiced their concern about the sustainability of intrapartum care in remote units and believed that safety and quality of local service were threatened due to loss of medical cover (Tucker et al., 2005). Although small rural birthing services without operating theatres would meet the women's expectation with regard to access to services, expectation of other aspects in maternity services would not likely be met under this model of care. Not having caesarean capabilities in small rural maternity units means that in emergency situations the safety of the women and the babies will largely depend on the transfer and ambulance system. Most if not all health professionals in this study noted that the need for a caesarean section can happen without warning and in these situations transport time is very critical in saving the mothers' and the babies' lives. In addition, this model of care is supposed to provide care for low-risk women but according to our health professional participants, changes in women's risk status can also happen anytime. There are also concerns that the available maternity units in rural Tasmania do not provide women the standard care because of the lack of practise in handling deliveries due to low volume of births and up to date training. Therefore, the

maternity units which are not equipped and staffed to deal with unexpected emergencies in childbirth would not be safe for the women and the babies. While the findings from the interviews with health professionals suggest that women always expect the safety of themselves and their babies come first, such maternity units in rural areas may not meet this aspect of women's expectation in maternity care.

Health professionals in this study have different perspectives on the model of small maternity units without caesarean section. Some health professionals supported them provided they had appropriately trained medical staff and good backup systems to deal with emergency situations. Some were strongly against small maternity units due to low volume of births, safety and quality reasons. It has been found from this study that obstetricians were more likely to oppose this model of care. By contrast, midwives were more likely to support small maternity units without caesarean capabilities. This might be due to the theoretical perspectives underlying each profession. The views of obstetricians suggest they are more likely to be influenced by medical model in which childbirth requires medical control over and monitoring of the situation in order to guarantee safety (Savage, 1986). The views of midwives more closely adhere to the feminist theorising or social model which is based on the idea that childbirth is a natural physiological event and that is the majority of pregnant women will have a normal and safe childbirth with little or no medical intervention and that those women who are not expected to have a normal childbirth can be predicted and selected (Oakley, 1999).

Our results reflect the controversial nature of safety of small maternity units in the literature. Some studies have suggested that low-intervention styles of small maternity care units offered in small rural settings are optimal for uncomplicated deliveries (Carroll, Reid, Biringer, Wilson, & Midmer, 1994; Nesbitt, Larson, Rosenblatt, & Hart, 1997b). In contrast, population studies in Europe (Heller, et al., 2002; Moster, et al., 1999) have found increased adverse outcomes for mothers and babies as the size of maternity units decreased. However, a large population-based study in Australia (Tracy, et al., 2006) looking at the association between volume of hospital births per annum and birth outcome for low risk women strongly

contrasted with the latter two European studies. In particular, Tracy and others (2006) found that the likelihood of neonatal death was significantly less in maternity hospitals with less than 2000 births per annum over the three year time period. Their study also found a strong association between lower operative intervention at birth and the size of hospital. Their results challenge the view that women giving birth in small maternity hospital are not safe:

The study was designed to test the widely held view that women who give birth in low volume maternity hospitals are at a disadvantage. These results challenge the view that small hospitals are not a safe place for women with uncomplicated pregnancies to give birth. In the absence of economic analysis, when perinatal birth outcomes are considered the evidence that low hospital volume predicts poorer maternal and child outcomes is not upheld. (Tracy, et al., 2006, p. 91)

Moreover, it has been found from this study that local maternity units in rural areas have an important role in the growth and sustainability of rural communities. There is already evidence that in rural Tasmania the lack of maternity services made health professionals become less satisfied with their work and less committed to their communities. As one of the survey respondents described what was happening in her community: *'There is a lack of nurses in rural areas...the constraints with providing midwifery training to rural staff. Staffs are moving on and locals are losing skilled staff.'* (Survey respondent 109). Midwives may find it impossible to provide care in communities where there are not any maternity services because midwives need GPs and institutional back-up to practise. Therefore, health care professionals and the community suffer the loss of skills related to reproductive and women's health due to the absence of maternity services. Many of them suffer under impossible on-call schedules, isolation and are thus more likely to choose to relocate. Such communities find it even harder to attract and retain health professionals because they would be deterred from moving to a community where services were downgraded (Farmer, et al., 2007). In addition, not only health professionals may choose to move away from rural communities which do not provide maternity services, but also rural women and

their family consider relocating themselves. There is a danger that in Tasmania many residents of the rural community, especially those in their reproductive years try to move: *'We currently live in Glenorchy however farm 45 minutes east of Oatlands- we would be living on the farm however I am not prepared to live so far away from maternal services until I have finished having my children. (Survey respondent 072)'*. Kearns and Joseph (1993) sought to locate sense of place studies within a much broader understanding of the intersection between people, places and social processes. Research has found that hospital hold important symbolic properties (Kearns & Joseph, 1997) and people attach their emotion to such building (Kearns, 1998). Scottish surveys have revealed that rural people invest strong feelings of pride in local services, linking their community's identity to their ongoing existence (Hope, et al., 2000). Further, maternity units have been viewed as a sign to businesses of a thriving community and considered important in encouraging younger people to remain and move into the area (Farmer, et al., 2007). This can be used to explain why rural women and families wanted to live close to the maternity hospital not only for the convenience but also their emotional attachment to the place.

Returning to the fact that the lack of maternity services was one of the reasons that health professionals and residents tried to move out of their community, this definitely affect the rural population (already being a small number) and therefore the growth of rural community. This is largely supported by the literature suggesting that the downgrading or closure of rural maternity units has a significant impact on the socio-economic vitality of the community (Farmer, et al., 2007; Klein, et al., 2002b; Rural Doctors Association of Australia, 2006). The local hospital is an important employer, sometimes the largest employer, in a small community and its downgrading or closure significantly affect the socio-economic vitality of the community (Rural Doctors Association of Australia, 2006). Klein and colleagues (2002a) recognised this factor:

The community itself becomes dysfunctional and unstable. Maternity and newborn care is realized too late as being a linchpin for sustainable communities, medically, socially, and economically.

Maternity and newborn care is realized too late as being a linchpin for sustainable communities, medically, socially, and economically. (Klein, et al., 2002b, p. 1179)

6.2.4. Information needs

Information is especially important for women living in rural areas where health services and choices for care are limited. Information plays an important role in helping women make decisions at all stages of their pregnancy. These decisions can affect health outcomes for both mothers and babies. Thus, in order to support rural women who are often disadvantaged in terms of health services, to make decisions about their care, caregivers and place of birth, women should be informed.

However, the results from the data analysis in this study have indicated rural women were not sufficiently informed about all options which were available to them. In particular, almost half of surveyed women claimed that they did not have an option of where to go to get antenatal checkups. More than 50% said they had no choice of health professionals for antenatal care. Almost 60% had no options of where they could give birth. While the lack of choices in maternity care could be partly attributed to the lack of services in rural areas, women in these areas still had options but were not informed. This is strengthened by the qualitative results suggesting that independent midwifery service, for example, was available but hardly known to women. One participant in this study who lived in a rural area at the time she gave birth noted that her doctor listed all care options available for her. However, that participant suspected that many doctors did not do the same as hers.

...I remember my doctor outlining a list of options for birthing and antenatal care, which I remember being very confused by! There were half a dozen options I think - GP shared care, birth centre, Know Your Midwife, private obstetrician, or home birth with private midwife... However, I suspect many GPs may not outline all the options as thoroughly. (Woman 4)

The findings from the quantitative and qualitative analysis previously described demonstrated that more educated women and women with private health insurance had more choice in maternity care due to their ability to search for information and the provisions of their private health cover policy. While these findings are important in terms of recognising the importance of education for the general public and advantages of having private health insurance, it is also important to recognise that women in rural areas have diverse education levels and resources. Thus, there is a need for all women to be informed about the care options available for them in order to allow them to make an informed decision. This is supported by the Report of Maternity Service Review in Australia (Department of Health and Ageing, 2009) showing that there is a need for evidence-based information to assist consumers in making decisions about their care.

Moreover, the study has found that women in rural areas were not always informed of choices about available services that they were entitled to such as scheduled scans, tests, home visits, lactation services and the existence of birthing centres. If women are informed about the right services, they would be saved from problems and issues which could cause them stress and anxiety. For instance, one participant in the interviews was having severe problems in breastfeeding her newborn for three months while one of the best lactation consultants lived just up the road from her. She was frustrated by the fact she was not informed that a lactation consultant was available in her community and it took her three months to find out.

6.2.5. Support needs

The results from the study have demonstrated that women in rural areas need more support in the postnatal period. The experience of pregnancy, childbirth and caring for a baby can be one of the most memorable times in a mother's life but it can also be exhausting, lonely and isolating. This is true for all women regardless of where they live. However, for women in rural areas where the lack of services often prevents providing support for these women in the early postnatal period it is very important to help them cope with their newborn babies. Many women in this study spoke of their problems in the postnatal period in rural areas from feeling isolated

to suffering severe postnatal depression (PND): *'I suffered severe post natal depression which went undiagnosed for 6 months.'* (Survey respondent 015). Symptoms of PND include tearfulness, sleep disturbances, change of appetite, fatigue, anxiety and the feelings of loss of control and can appear at any time in the first year after childbirth. Many studies have suggested that PND affects not only the woman's health but also the wellbeing of other members of her family. Postnatal depression has been related to child behavioral problems, marital difficulties, disturbances in the mother/child relationship, sudden infant death syndrome, and even infanticide (Bell, 1998; Welburn, 1980). Data analysis in this study has suggested that there is a possibility that women's postnatal depression is attributable to the lack of support in rural areas as many participants mentioned *'We have 1 child health nurse for one morning a week when I rang for an appointment because I felt I was undergoing PND (postnatal depression) and had to wait 3-4 weeks for an appointment'* (Survey respondent 149) or *'There is a distinct lack of support for mothers, fathers and children in this group such as fathers/isolation/depression and post natal depression'* (Survey respondent 021).

The relationship between social support and postnatal depression has been documented in the literature. Stern and Kruckman (1983) have found that in many societies, social support exists for the new mother who has gone through a transition role during the event of childbirth. This support allows the mother to rest and to be relieved from housework which all serves to minimise the stresses of childbirth. They have suggested that a high incidence of postpartum depression may be due to the lack of social structural support for the mother. Moreover, studies (Pillsbury, 1978; Chu, 1993) has found that there was little evidence of PND among the Chinese, and that family and social support during puerperium minimized Chinese women's chances of experiencing PND. Hoang and colleagues (2009) support the previous studies suggesting that there is a potential relationship between PND and lack of support among Asian migrant women.

These above studies suggest that there is a link between PND and the quality of family and community support. This is supported by this study. Women in the study who received support from family and community in the postnatal period often had

a healthy transition through this stressful time. In contrast, women who had a little or no support from the family and community often mentioned isolation and postnatal depression. While some women luckily have extended family and a network of friends to help, many women in rural areas live away from their families and may be new to the area. In some situations, their partners who are the only helping hands are not very helpful: *'Both my parents are dead and we are not on good terms with my husband's family and my husband's response to having a new baby in the house was to disappear for the better part of the day'* (Participant 20). Thus, support from the community plays an important role in offering women a hand to protect them from PND and help them through the stressful period of having a new baby. One of the participants in this study acknowledged the supportive role of the community nurse in her situation:

The community nurses that came to my house after the birth of both my children were fabulous... shortly before the birth of my eldest my brother committed suicide which impacted upon my pregnancy and then shortly after the birth of my youngest their father and I split so it was the constant unwavering support of the auxiliary nurses that kept me afloat during those hard times. (Woman 8)

6.2.6. Need for quality services

The needs in this section may be applied for all women regardless of where they live in rural or urban areas, but are especially important to rural women who are often isolated from the support of maternity services.

6.2.6.1. Continuity of care

Currently in the Australian public hospital system, most women see a number of different health professionals through their pregnancy, during labour and birth and in the postnatal period. An international study on multidisciplinary collaborative maternity care practice in Europe and Australia (Kateman & Herschderfer, 2005) noted that it is not uncommon for a woman to see as many as thirty different health professionals through the course of her pregnancy and childbearing

experience in the Australian public health system. Having different caregivers has been linked with women's criticisms which include care fragmentation, inconsistency, long waiting times and being treated like a number (Reid, 1994). This is illustrated in this study, for example, in that women in the study received inconsistent advice on breastfeeding from different caregivers. Consequently, they were confused and struggled to feed their newborn babies. In addition to this, having to see many health professionals, women have to repeat the same thing over and over but there is still a possibility of missing information. Many women in this study found it inconvenient to repeat things each time they went for checkups and a lot of information was missing due to their seeing different health professionals. Furthermore, seeing too many different caregivers made many studied women feel like they were just someone's job and not a person. These findings from interviews can be used to explain the survey results indicating that participants who saw different health professionals each time during their pregnancy tended to be less satisfied with their care. It has been suggested that having continuity of care would overcome those issues.

Continuity of care is defined as care which is not fragmented, where there is good communication within the system and consistent policies (Green, Renfrew, & Curtis, 2000, p. 187). Continuity of carers is suggested as one way of achieving continuity of care. This is consistent with the survey results showing that the majority of survey respondents viewed that having one main carer is important. In addition, a significant number of survey respondents believed that it is important to be cared for in labour by a midwife whom they had met during pregnancy. Furthermore, discussions with women have supported and clarified the survey results on this issue. Firstly, women in the study believed that having one main carer throughout pregnancy, in labour and early postnatal period helps them build a relationship, trust and comfort with their carer. Secondly, it makes women feel that they are genuinely cared for, not just as someone's job. In addition, having continuity of care is even more important for women in rural and isolated areas because they are often away from their family and have very little support. Finally, women who actually have experienced continuity of a carer often spoke about their satisfaction

with care. However, it is important to note that those women were given care by private obstetricians who are only available for women with private insurance cover.

In the public system, the findings from the interviews with women and health professionals in Tasmania have revealed that the continuity of carers is almost impossible due to the nature of the public hospital system. Nearly all women in the interviews except those under private obstetricians' care did not experience continuity of carers in the public hospital system. From the health professionals' point of view, the majority believed that it is impossible to provide continuity of carers in the public hospital because of two main reasons. Firstly, staff cannot be available 24 hours a day 7 days a week for work to make continuity of carer possible. Secondly, it is not a safe practice for a patient to be under one person's care. The information needs to be shared among the team of health professionals in order to make right decisions for care. Although providing continuity of carer is difficult to achieve in public health, health professionals in the study noted that they could provide some degree of continuity of care from the same team. However, the study has found that women who gave birth more than 5 years ago were more likely to experience continuity of carer than women who have had childbirth experience recently. These results have suggested that providing continuity of care is more practical in a small local hospital than in a major hospital.

Despite women believing in continuity of care, the data analysis has shown that many participants in our study tended to pay more attention to the quality of care other than continuity of carer. As mentioned in the previous chapter, though women saw different health professionals they emphasised the quality of service that they were happy with as 'professional, lovely, supportive, understanding, helpful, consistent, expert, excellent and above standard'. This is consistent with Allen, Dowling and Williams' (1997) observation that women laid more stress on the quality of the care which they received from the team of caregivers and were usually happy to receive care from any member of the team. In their descriptive study of three midwifery group practices, they asked women what their main sources of satisfaction were in their care overall. The high professional standards of

the midwives and their friendliness were the most common answers. Women also appreciated being treated like a human being. Continuity of carer was mentioned by women less than the other aspects of care. Furthermore, Green and colleagues (2000) in 'Continuity of carer: what matters to women? A review of the evidence' concluded that women do not often value continuity for its own sake, rather women value what they expect to follow from continuity which is consistent care from someone whom they can trust. Continuous care from a single caregiver may be one way to achieve this, but it is not the only way and other aspects of woman-centred care seem more important.

Another important finding of the study is that women often have a preference for what they have experienced. In particular, those who have experienced continuity of a carer are more likely to think that it is very important to have one main carer. In contrast, women who have not, tended to consider continuity of a single carer as less important. This is consistent with the literature suggesting women who had had a known carer in labour were considerably more likely to say that this was important than were women who had not (Allen, et al., 1997; Walker, Hall, & Thomas, 1995). This study therefore supports the argument of Green and colleagues (2000, p. 195) suggesting that there has been an emphasis on continuity of carer but little attempt to assess continuity or quality of care and there is a need to organise services that put less strain on health professionals' lives and may be equally satisfying for both women and health professionals (Green, et al., 2000).

6.2.6.2. Antenatal classes

The survey and interview results from the study have suggested that antenatal classes should be improved to better meet the needs of all expectant mothers regardless of where they live. Most participants agreed that they had been prepared well for childbirth. They were well informed about the stages of labour and various options in terms of pain relief. However, women commented that they had been less well prepared for looking after babies by antenatal classes. They needed to be prepared on actual parenting skills such as how to settle the newborn, the importance of a routine, the difference in cries and what to do with each cry.

Some participants expressed their needs for being advised about all the options for newborn feeding including formula and the pros and cons of breast feeding and some degrees of freedom in feeding their newborns instead of being pushed to breastfeed.

6.2.6.3. Empowerment

One of the important findings from our study is that women expressed a need to have more sense of control over their care. In particular, they wished to be involved in decision making about their care. They wanted to be listened to and respected by their caregivers. As one participant recalled: *'I had contractions for 5 days and went up to the hospital each day ... On the fifth day my baby's heart rate was going from 190 down to 45, so I was in theatre within 15 minutes. Because they are so busy they forget that a mother (not 1st time) knows her body.'* (Woman 17). Furthermore, when women's needs (i.e. birthing position and pain relief) are not respected or listened to by caregivers during labour, it often turns into a battle for women in order to get their wish granted. As a consequence, women were often dissatisfied with care which could negatively affect their future: *'Midwives in this state need to be better at actual care in terms of manner and respectful and not judgemental. My experience has left me not wanting to have any more children'* (Woman 2).

Our findings support the literature showing that involvement in decision making is one of the important characteristics of care that contributes to women's satisfaction (Garcia, Ness, & MacKeith, 1996; Morgan, Fenwick, McKenzie, & Wolfe, 1998). Morgan and colleagues (1998) asked women postnatally to rate the importance of different aspects of midwifery care. Feeling in control and involved in decision making were more often rated as 'very important indeed'. Similarly, Garcia and others (1996) asked women to rate a number of characteristics of care on the scale of very important, fairly important or not very important. The characteristics rated as 'very important' by a significant number of women were, being treated kindly and respectfully and letting the woman herself make the decisions. For rural women, it is crucial that they will take their personal rural situation into account when making decisions (travel time, ease of having partner around, child care, cost

of income foregone etc.). However, we can't expect the health professionals to understand those concerns of rural women.

When the need for participation in decision making is met, women are satisfied with care and gain more confidence and self-esteem. This was also true for the case of a planned home birth in this study. Despite being classified as a high risk patient because of having diabetes, our participant convinced the hospital that she was diet controlled and should be allowed to birth in the birth centre. However, she went one step further to choose a planned homebirth. She had an amazing birth in her own home. However, the most important thing was that she had a great sense of control of the whole process which greatly contributed to her confidence and self-esteem. Having a certain degree of control over maternity care is especially important for women in rural areas where there is little or no choice of services and care givers.

6.3. Summary and conclusion

The chapter has discussed the sets of needs of women in rural areas in Tasmania. The first set of needs of rural women in maternity care is access needs. Services in rural areas are lacking and fall well short of meeting women's access needs, as demonstrated by financial and social costs, risk of having labouring en route, inconvenience, stress and anxiety. The study confirms the literature suggesting that the lack of maternity services in rural areas has shifted cost and risk from the health care system to rural women, babies and families. The study findings strongly suggest that access can be improved by providing women with antenatal, postnatal and support services in their own communities even if birthing services are not available locally for financial, safety or workforce reasons.

The second set of rural women's need in maternity care is safety needs. In terms of this need, the study adds important knowledge to the literature in a number of ways. Firstly, it provides information on rural women's preferences for different models of maternity care including medical, midwifery and planned home birth models of care. Secondly, the study presents rural women's views on travel time to

safe delivery. The combination of women's views on preferences of models of care and willingness to travel to a major hospital indicate that women have to trade-off between access to services and considerations of safety. This is very important since it has implications for health service design and provision in rural areas. Finally, this research is the first study in the literature to present health professionals' views on the models of small maternity units in rural communities and planned home birth. While the sample is small, this study has been found that the obstetricians were less likely to support these models, most likely because they believe in the superiority of the 'medical model'. By contrast, midwives were more likely to support these models and influenced by the feminist theorising.

The next set of needs is the need for rural birthing services. The presence of small rural birth services has been discussed in relation to their role in the growth and sustainability of rural communities. Furthermore, the study has identified women's needs in information and support. Women need to be informed about all options and services available to them and that can be done through the collaboration of health professionals in the local areas and the major hospital. Social and community support play an important role in helping women in the challenging time of having a newborn baby and prevent them from suffering postnatal depression. Finally, women regardless of where they live desire quality services from the health system. In particular, they want to be provided with consistent advice and information, involved in decision making and treated kindly and respectfully, and to have a say in decisions about their care. Moreover, women want to be cared for by friendly, helpful and skilled staff with whom they are comfortable to ask questions and are confident they will get proper answers. The next chapter will present the main findings as answers to the three research questions or the aims of the study.

Chapter 7 – Conclusion

7.1. Introduction

The conclusion chapter metaphorically marks the end of a research journey. It is a place to critically reflect on the process and achievements, particularly on the research findings and some implications and put forward possible recommendations. What has been achieved in the study? What windows can the study open up for further studies in this important and useful area of research? This study has been completed, but the research journey is not completed in the sense that when some questions have been answered, new questions can emerge and new horizons open up. This chapter revisits some of the issues and findings, examines implications and make recommendations.

7.2. Achievements of the study

The achievements of the study are presented in three sections including the findings, the significance of the study and knowledge transfer.

7.2.1. The findings

The study has achieved its main aim which was to identify the gaps between the needs of women living in rural Tasmania and the State's current maternity health system. The data analysis of 210 survey questionnaires, interviews with 22 women and interviews with 20 maternity health professionals and more than 150 extensive written comments from the survey has revealed those needs, which are illustrated in Figure 7-1.



Figure 7-1: Women's unmet needs in maternity care

7.2.1.1. Access needs

The first set of needs of women in maternity care in rural Tasmania is access needs. The findings of this study support the literature suggesting that services in rural areas are lacking and not meeting women's access needs (Alston et al., 2006; Roach & Downes, 2007). Evidence from this research shows that when those needs are not met, women and families face many challenges in order to access the maternity services they need. Firstly, it is assumed by hospitals, health authorities and health departments that it is cost effective to shut down rural maternity units. However, findings from our study suggest that closure of these services shifts costs from the health budget to rural families and communities in the form of travel costs, accommodation, childcare costs, loss of income and other expenses. Secondly, women often face social disruption because they are removed from their social network and separated from their family members in order to give birth in an

unfamiliar hospital. Thirdly, women face the risk of giving birth before arriving at a major hospital. As a consequence of these challenges, women experience stress, fear and anxiety. These negative feelings have been linked with adverse outcomes for mothers and babies (Kornelsen, et al., 2009; Larimore & Davis, 1995; Nesbitt, et al., 1990; Sontheimer, et al., 2008).

7.2.1.2. Safety needs

The second unmet set of needs are about safety. Both women and health professionals in the study believed that there was a risk of encountering an unexpected emergency situation in childbirth. The study contributes new knowledge to the body of the literature in many aspects. It is the first study in Australia to present insights into rural women's preferences between different models of maternity care including medical, midwifery and planned home birth models of care. The findings indicate that women prefer to give birth in an adequately equipped hospital, but they have to weigh up this option with the time taken to travel to that place and the difficulties associated with travel. The quantitative results indicate that women have to trade-off between access to services and considerations of safety. This is validated by the interview results showing that some women did not choose to give birth at home with the assistance of a midwife, despite having to travel to a major hospital. Women were willing to travel, but within limits, to assure their safety rather than forgoing their safety by giving birth at home. The combination of women's views on preferences in models of care and willingness to travel to a major hospital indicate that women have to trade-off between access to services and considerations of safety. Within the current context of rural health services, this is significant since it provides implications for health service designs and provisions in rural areas.

Furthermore, this research is the first study to present Australian health professionals' views on the models of small maternity units in rural communities and planned home birth. Many health professionals in the study did not see planned home birth as a safe model of care for rural women. Instead they recommended that a birth centre would be a better option than a planned home

birth if a woman wished to give birth in a homely environment and under the care of midwives. In dealing with the dilemmas in rural communities such as workforce shortages, cost considerations and a small number of deliveries, rural birthing units without caesarean delivery capabilities have been implemented in one rural community across Tasmania. The results from interviewing health professionals indicate that this model of care would meet women's access needs and provide some degree of quality of care due to the small size of the maternity units. However, with the current availability of human resources in rural communities in Tasmania, there are concerns over the viability and the safety offered by this model of care. Importantly, it has been found that the obstetricians were less likely to support small maternity units without caesarean sections and planned home birth models of care, most likely because they may be influenced by the medical model. By contrast, midwives were more likely to support these models, most likely because they are influenced by feminist theorising.

7.2.1.3. Needs for rural birthing services

The third set of unmet needs relates to birthing services in rural communities. The study findings suggest that local maternity units in rural areas have an important role to play in the growth and sustainability of rural communities. This is because rural women may limit the size of their families or choose not to live in rural communities during their childbearing years. In addition, qualitative data analysis has revealed that women who gave birth in their local hospital often had a good experience of childbirth and expressed their concerns for other women who were no longer able to deliver in their own community. This confirms the quantitative analysis results suggesting that women who gave birth some time ago were more likely to be satisfied with care and have continuity of care, but less likely to have to travel further to access services than women who gave birth more recently. Furthermore, the quantitative and qualitative findings demonstrate women's strong preference for bringing back small rural birthing services for the comfort and convenience of younger rural women and to some extent contribute to the growth of rural communities.

7.2.1.4. Information needs

The next set of rural women's needs is information needs. The findings from the study have indicated that rural women were not sufficiently informed about all of the options and services available to them. For instance, nearly 50% of surveyed women said that they did not have an option of where to go to get antenatal checkups. More than 50% believed that they had no choice of health professionals for antenatal care. Almost 60% felt that they had no options of where they could give birth. While the lack of choices in maternity care could be partly attributed to the lack of services in rural areas, it was found that women in these areas still had options but were not informed. This is confirmed by the qualitative results showing that independent midwifery services, for example, were available to rural women, but few women were aware of those services. The findings from the quantitative and qualitative analysis demonstrate that level of education and private health insurance had an association with women's choice in maternity care. It is important to recognise that women in rural areas have diverse education levels and resources. Thus, there is a need for all women to be informed about the care options available for them in order to allow them to make informed decisions.

7.2.1.5. Support needs

Another set of needs of women in maternity care in rural Tasmania is support needs. Many women in this study spoke of their problems in the postnatal period in rural areas from feeling isolated to suffering severe postnatal depression (PND). Both previous research and this study suggest that there is a possibility that women's postnatal depression is attributable to the lack of support in rural areas. Women in the study who received support from family and community in the postnatal period often had a healthy transition through this stressful time. In contrast, women who had little or no support from family or their community often mentioned isolation and postnatal depression. While some women are fortunate enough to have extended family and a network of friends to help them, many women in rural areas live away from their families and may be new to the area. Thus, support from the community plays an important role in offering women a

hand to protect them from PND and to help them through the stressful period of having a baby.

7.2.1.6. Need for quality services

The final set of needs is the need for quality services. All women, regardless of whether they live in rural or urban areas, desire high quality maternity services. This study has identified several aspects of service quality which need to be improved to meet women's needs. Firstly, in terms of continuity of care, the qualitative results show that women had to repeat the same things to different health professionals but information was still missing. Furthermore, seeing too many different caregivers made many women feel like they were being treated like a number. The findings from the study also suggest that women received inconsistent advice from different caregivers in terms of breastfeeding. These qualitative findings explain the survey results, which indicated that participants who saw different health professionals during their pregnancy tended to be less satisfied with their care.

The study results suggest that continuity of carers is just one way to resolve these issues. However, the women and health professionals in the study remarked that the implementation of continuity of carers is almost impossible due to the nature of the public hospital system. In fact, many woman participants in our study tended to pay more attention to other aspects of care such as the high level of expertise and courtesy of health professionals than continuity of carers.

Other unmet needs in quality of care include the quality of antenatal classes. The study suggests that antenatal education had not prepared some women well enough to care for their babies. Women need to be prepared on actual parenting skills to cope with newborns. Some participants expressed their need for being advised about all feeding options instead of being pushed to breastfeed.

Finally, women in this study expressed their need to have more sense of control over their care. In particular, they wished to be involved in decision making about their care. They wanted to be listened to and respected by their caregivers. The evidence from this study shows that when women were not involved in making

decisions about their own care, they were dissatisfied with their care and discouraged from having children in the future. In contrast, when the need for participation in decision making was met, women were satisfied with their care and gained more confidence and self-esteem.

7.2.2. Significance of the study

One of the achievements of the study is that it contributes to the literature and body of knowledge in the field and assists the health care system in terms of service design and distribution. The significance of the study is discussed from two aspects: contextual and theoretical significance.

7.2.2.1. Theoretical significance

This study contributes to the body of knowledge in a number of ways. Firstly, it contributes to the literature in terms of the methodological perspective. Most studies on rural women's experiences of maternity care services have utilised a qualitative approach while others have employed quantitative research methodology. In the literature, only one study has used a mixed method design (Pitchforth, et al., 2008) but it was limited in specific aspects of women's preferences in maternity care. There is only one Canadian study (Kornelsen & Grzybowski, 2005) which investigates rural women's needs in maternity care using a qualitative method design. This research study successfully employed the mixed method approach to investigate women's needs in maternity care, the current services and the gaps between women's needs and those services. The interviews with women helped to validate, strengthen and confirm the survey results. The interviews gave valuable insights into their needs and preferences in maternity care which were necessary in interpreting the results from the survey. In addition, the data was triangulated by conducting interviews with both women and health care providers. The combined results provide comprehensive sets of needs and preferences of rural women in maternity care. Therefore, the methodology of this study can be applied in similar studies investigating women's experiences in maternity and health services in general.

Secondly, the study makes a timely contribution to the body of knowledge in the field of rural health services. Although the impact of the closure of rural maternity units on the outcomes for women and babies has been widely researched in the literature, studies on rural women's broader maternity care needs from ante to postnatal are limited. Some studies focus on specific aspects of rural women's needs such as access needs. Given the current situation in rural areas, identifying rural women's needs is crucial in order to improve their access and outcomes. Yet there is to date no specific study investigating the maternity needs of rural communities covering antenatal, birthing and postnatal care and comparing those needs with the existing maternity services in Australian literature. Thus, this study fills an important gap in the literature making a timely and significant contribution to the body of knowledge about rural women's needs in maternity care. The study provides a detailed picture of women's needs and preferences in maternity services throughout the period of having a baby to the early postnatal period.

Furthermore, the study gives insightful information into the views of maternity health professionals on the issue of planned home birth models of care. The study has suggested that there is a gap between midwifery and obstetric care in providing maternity care for women. They explained that the differences between those two professions are the different approaches in training. These findings help to raise awareness about the similarities and differences between maternity care providers. The findings reveal that despite having different opinions on planned home births, health professionals share a common goal to protect the women and the newborns from unexpected adverse outcomes during childbirth. When both sides understand each other better, they are able to collaborate better and continue to provide a high standard of care for women and their babies.

In addition, this research provides significant insights for policy makers, health professionals and other stakeholders into rural women's needs and preferences in maternity care. Particularly, the study provides an understanding of Tasmanian rural women's preferences for a range of models of intrapartum care and travel time to the hospital. It informs policy makers in State government about the service designs and provision of maternity services in rural Tasmania. In addition, the concerns

raised about the sustainability and safety of small rural birthing services without caesarean capabilities provide some recommendations for policy makers when planning for this model of care. Overall, the findings of this research suggest that the maternity care system should not only provide rural women access to care but also meet their expectation in safety and quality of care.

Another significant contribution of the study is in terms of social and economic development in rural Tasmania. This study suggests that due to the closure of local maternity services, cost and risk have shifted from the health care system to rural women and their families. Moreover, the findings indicate that maternity care services may influence the growth and sustainability of rural communities. The findings of the study identify important implications for future social economic plans and community development in the State. Specifically, further withdrawal of health care services for women should be assessed in terms of social and economic perspectives. Therefore, community development plans should include maternity services, including ante and post natal care, as these services directly affect the viability and growth of rural communities.

7.2.2.2. Contextual significance

In addition to the theoretical significance, the study makes a unique contribution to rural Tasmania, in particular in finding that maternity services are not meeting the needs of rural women and consumer interests are poorly represented in Tasmania (Wood, 2008). Firstly, the study benefits health professionals in that it provides comprehensive information on the unmet needs of women in maternity care. Specifically, women desire high quality services, such as continuity of quality care, and to be respected and listened to by health care providers. Health professionals cannot be expected to understand the specifics of every rural woman's social context, and should therefore take women's views and preferences into account. In addition, health professionals should be aware of travel times and access difficulties when considering options for maternity care for rural women. Adoption of recommendations of the study will help rural women and communities to gain equality in access to services and outcomes.

Finally, adoption of recommendations would contribute to the improvement of women's health services in the six selected rural communities. The results can be generalised to include other rural settings in Tasmania because the six rural communities were selected to represent all communities in Tasmania. Although, the generalisation of the findings to other rural settings on the mainland of Australia remains unknown, the study is a good reference in terms of the issues which rural women face when there is a lack of maternity services.

7.2.3. Knowledge transfer

In addition to the findings and the significance of the study, another achievement of the study is that the knowledge and outcomes from the study have been disseminated and shared with researchers and other stakeholders since the early stages of the research, such as:

- The thorough literature review from the first phase of the research was reported in a book chapter entitled "Social Impacts of Closure of Maternity Services in Rural Areas" that was recently published by NOVA Science Publishers Inc.
- The research plan including the aims and objectives was presented in at presented at the 2011 Rural Health Graduate Research Symposium, University of Tasmania, Hobart.
- On the completion of the study, the researcher presented a paper entitled 'Complete and detailed picture of maternity needs of women in rural areas in Tasmania' at Sharing the Experience-Reflections on Graduate Research Journey and conference participation, University of Tasmania.
- Three articles derived from this study have been written and submitted to journals and are currently being reviewed, namely (i) 'Women in Tasmania and different models of maternity care: A mixed method study', (ii) 'Small rural maternity units without caesarean section in Tasmania, Australia: Is it safe and sustainable in health professionals' views? A qualitative study' and (iii) 'The commonality and differences in the views on home birth of health professionals in Tasmania, Australia: A qualitative study'.

7.3. Strengths and weaknesses of the study

The following points are considered to be the strengths of the study. Firstly, the aims and objectives of the study have been fully checked before the study was conducted. The researcher's previous project suggests that rural women are having difficulties in accessing maternity services and are facing many challenges from that lack of services. In addition, the thorough literature review of this thesis confirms that the study is timely, since maternity care is not meeting the needs of rural and remote women.

The second strength is that the study successfully constructs and uses the conceptual framework to guide the whole study. In particular, the framework informs the research design and provides clear links between the literature and the research questions. It also provides reference points for interpreting the data, structuring the research findings and discussion.

Furthermore, the use of the mixed methods design enhances the data collection and data analysis since insights gained from different perspectives were obtained. In addition, the reliability and validity of the research instruments were checked to ensure the quality of the data. Data analysis findings from the quantitative and qualitative methods are very complementary. The results from the interviews validate and confirm the survey results and vice versa. Furthermore, the interviews were conducted with both women and health professionals for triangulation purposes. Finally, the findings of the study are well supported by the literature suggesting the significance, reliability and validation of the study.

One of the limitations of the study is that although there are more rural communities across Tasmania, the researcher could only conduct the study in the six selected rural areas. Therefore the outcomes of the study may not fully capture the broad range of rural communities in Tasmania. Another limitation of this study involves the length of time since the childbirth experiences of some of the women in the survey. One might question the relevance or accuracy of the information that those women provided in the survey, since they might have given birth a long time ago and might not remember what happened in the past. However, studies have

shown that years later, women's memories of childbirth are generally accurate, and many are strikingly vivid (Simkin, 1991, 1992).

7.4. Personal meanings associated with this research

Conducting research is not only about the research itself. Consciously and unconsciously, there is a close and complex interaction between the researcher as a person and the research project as an entity. From the researcher's point of view, a research project is a dynamic journey. In this journey, the researcher has gained many invaluable skills and experiences which have greatly contributed to the academic and personal development of the researcher. Thus, in this section, the first person pronouns 'I' and 'me' will be used to present the personal dimension of the researcher into her research.

- As a researcher, this journey has helped me to grow academically and personally. While conducting my research under supervision I have greatly benefited from the supervisors' experiences, knowledge and skills which sometimes cannot be found in any books. One of the most valuable things I have learned from my supervisors is the need for critical and logical thinking about the research. Two questions which should be satisfactorily answered before the study is commenced are: What is the theory underlying the research? What is the logical structure of the research? These are the foundation stones of the study and everything is built upon them. It is true to say that a good foundation contributes to the success of the research.
- Furthermore, project management skills are a valuable asset that I have gained from undertaking this research. I have learned about those skills from my supervisors and from the formal training. Time, cost and quality are the three factors which affect the success of the research project. The research should be delivered with quality within the predetermined time-frame and budget. I have been greatly inspired by my supervisors who manage different research projects smoothly and successfully. It may be too early for me to say about the quality of this research, but in terms of time and cost, I am confident that I have achieved those two important aims.

- Another academic skill that I have achieved is public speaking. Having the opportunity to present my study at conferences and seminars, I have overcome my fear of public speaking. I have gone from hiding away from people, to looking forward to giving my presentation when I go to a conference. The feedback from conference audiences has inspired and enhanced my self-esteem.
- In addition, the research journey has not only enriched my knowledge about women's health services, health policy, concepts and issues in maternity care services in rural areas, but it has also provided me with necessary research skills. I have learned to use technology such as SPSS, Nvivo and Endnote to facilitate the research process. I believe that those technological programs should be recognised as valuable research tools for today's researchers.
- Embarking on this research study has contributed not only to my academic growth but also to my personal growth. The journey has given me a great sense of personal achievement because overcoming one's own limitations is already a great victory. When I started my PhD study, my baby was just born. At that time I knew that I could choose just my baby or both baby and PhD thesis. I chose the latter and at the time of writing I am so glad that I made that decision. Having a newborn baby and undertaking a PhD at the same time was a challenge to me. In return, I have gained so many important life skills including time management skills and self-discipline. It is good to know that my baby is growing happily and cheerfully with this thesis.
- Finally, being a mother and a woman studying maternity care services for rural women has exposed me to remarkable life experiences. The women participating in my study were very comfortable sharing their experiences with a researcher who is also a woman and a mother. As a mother, I felt that I had real emotional connections with the interviewed women. Those women gave me the opportunity to listen to their life experiences and to enrich my understanding of rural services, social disadvantage and inequity of access in rural communities. The challenges that rural women encountered have motivated me to undertake more research with the purpose of helping women to gain equity in access and outcomes.

To conclude this section, the researcher believes that the present study not only significantly contributes to the body of knowledge and health services in practice, but also develops personal growth of the researcher, intellectually, academically, professionally and socially.

7.5. Future research

The richness of the qualitative data and the comprehensive quantitative data collected in this study provide a full and detailed picture of the needs of women in maternity care in rural settings. Future studies can build on the existing information provided in this study by focusing on specific issues raised in the study.

Opportunities for future research regarding maternity services for women in rural areas and in general include:

- Developing models of maternity care which respond to the needs of women but also deal with the existing difficulties that the health system is facing in rural areas such as workforce shortages, cost and safety considerations.
- Study into the application of technology in the delivery of health services in rural areas, such as e-health, video conferences and other advanced information technology. This research could be undertaken through the National Broadband Network plan which provides key enabling infrastructure to support Australia becoming one of the world's leading digital economies by 2020 (Australian Government, 2011).
- Evidence from this study suggests that the closure of rural birthing services shifts cost from the health care system to families. Furthermore, the findings show that these critical services affect the growth and sustainability of rural communities. Therefore, there is a need to investigate the cost benefit of closing down rural maternity services before any further rural birthing services are shut down.
- Further study should focus on mental health for rural communities as the study results identify that not only rural women but men are isolated and experience depression following the birth of their children. Therefore, intervention is needed to improve mental health for men and women in rural areas.

7.6. Recommendations

To bridge the gaps between women's needs and the maternity care system, this study proposes a set of recommendations.

7.6.1. Recommendation 1

Firstly, access needs can be met by providing basic services for women in their local communities, including antenatal classes, antenatal checkups, postnatal home support and child health services. This can be done through existing health professionals in women's communities and/or outreach or visiting services by qualified health professionals.

7.6.2. Recommendation 2

Secondly, in order to meet the safety needs of women, rural hospitals without maternity services should be properly equipped and prepared to deal with unexpected emergencies in childbirth to ensure the safety of women and their babies. Appropriately equipped and skilled ambulance services should be in place for all rural hospitals. Furthermore, since birth centres have been identified as a model of care to meet women's safety needs and women have expressed a preference to be cared for by midwives, the availability of birth centres either in rural or urban areas should be increased and promoted. In addition, the health care system should design and provide services which are within acceptable and comfortable travel distance as well as ensure the safety in terms of preferred models of care. Thirdly, in order to meet women's needs for rural birthing services, the Tasmanian government should stop further closure of rural birthing services as these closures may affect the growth and sustainability of rural communities. Furthermore, in order to stimulate the growth and sustainability of rural communities, the government should consider reopening small rural birthing services, utilising a multi-skilled rural workforce and exploring different models of maternity care. Due to the health care system constraints, this need may not be met in the short term. However, appropriate funding for rural hospitals and rural workforce training would improve the current situation in rural areas. The need for

rural birthing services can be met by utilising appropriately trained GP obstetricians, midwives and multi-skilled rural nurses. Health professionals who work in rural hospitals where there would be a low volume of deliveries should be given opportunities and encouragement to attend regular training and working for certain time in major hospitals to keep their skills up to date.

7.6.3. Recommendation 3

In addition, women should be informed about the maternity care options and services available to them and the associated limitations and implications. This can be done through their health professionals in their local community. Major hospitals, rural health centres and GPs should work together to inform women about the services that they need.

Furthermore, support needs of rural women can be met by providing maternal and child health services on a more regular basis in their communities. Funding should be allocated to provide on-going support for rural women in the postnatal period such as regular classes on looking after babies, toddlers, mothers groups, groups for new parents and social and learning opportunities for infants and parents. There should be more and longer support in home for mothers and babies from community nurses in the postnatal period.

7.6.4. Recommendation 4

Moreover, women value quality of services and having continuity of carer is only one way to achieve continuity of care. Other aspects of care for women should be focused such as consistent advice, friendly and helpful staff, skilled staff, being given information, being treated kindly and respectfully and involved in decision making in their care. The health care system or hospitals should develop protocols and train staff to use them in order to achieve those qualities. Child health services in rural communities should provide quality services for women throughout their pregnancy, including antenatal education and postnatal care as part of continuity of care and reduce the need to travel. In addition, there may be a need for a review of the maternity care system as the study raised some questions about the quality of

maternity services in Tasmania, such as inconsistent advice, fragmented care, long waiting time for services and lack of privacy.

7.6.5. Recommendation 5

Finally, health services should provide all women regardless of where they live with more information about antenatal classes on actual parenting skills such as routine and settlings, on different choices to feed their babies including formula feeding and listen to their wishes in feeding their babies. As it is difficult for health professionals to understand the specifics of every rural woman's social context, they should therefore take women's views and preferences into account. Health professionals should also be aware of travel times and access difficulties when considering options for maternity care for rural women.

7.7. Conclusion

Exhaustive searches of the literature confirm that this is the first study in Australia to holistically examine rural women's needs in maternity care. This study is timely since there is evidence that maternity services in Australia are not meeting the needs of rural and remote women (Department of Health and Ageing, 2009). This research provides comprehensive and insightful information on consumers' needs in maternity services in Tasmania. Findings are drawn from the survey of 210 women and in-depth interviews with 22 women and 20 health professionals across rural Tasmania. The study provides a comprehensive picture of women's needs in maternity care in rural Tasmania including access needs, safety needs, needs for small rural birthing services, support and information needs and needs for quality services. If women in rural and remote areas are to be equal to all Australian women in terms of access and health outcomes, these needs must be met and catered for by the health care system.

The study has made a significant and timely contribution to the field of research since there is an urgent need to improve maternity access and outcomes for rural women and families. The study has provided sets of recommendations to help policy makers to bridge the unmatched gaps between women's needs and available

services. Finally, it is concluded that in order to achieve a maternity care system which is woman-centred and meets their needs and preferences (Australian Health Ministers' Conference, 2011), service design, provision and delivery of maternity care should take into account women's needs and preferences found in this research.

Conducting doctoral research is not just about embarking on an academic endeavour. It is also a meaningful journey for the researcher with many challenging and inspiring life experiences. From the academic candidature point of view, the task has been completed and the achievements have been fulfilled. However, personally the research journey has just reached a turning point which has opened up new directions on the horizon. The researcher reflects on the journey with a sense of satisfaction and gratitude, and looks forward to the future with confidence and excitement.

References

- AIHW. (2011). Rural, Remote and Metropolitan Areas (RRMA) classification. Retrieved 15/05, 2012
- Allen, D., & Kamradt, J. (1991). Relationship of infant mortality to the availability of obstetrical care in Indiana. *J Fam Pract*, 33(6), 609-613.
- Allen, I., Dowling, B., & Williams, S. (1997). *A leading role for midwives? Evaluation of midwifery group practice development projects*: Policy Studies Institute.
- Alston, M. (1995). *Women on the land: the hidden heart of rural Australia*. Sydney: University of NSW Press.
- Alston, M., Allan, J., Dietsch, E., Wilkinson, J., Shankar, J., Osburn, L., et al. (2006). Brutal neglect: Australian rural women's access to health services. *Rural Remote Health*, 6(1), 475.
- Alston, M., & Kent, J. (2004). *The social impacts of drought*. Wagga Wagga, NSW: Centre for Rural Social Research, Charles Sturt University, 2004. .
- Anderson, R., & Anderson, D. (1999). The cost-effectiveness of home birth. *J Nurse Midwifery*, 44, 30-35.
- Australian Breastfeeding Association. (2005). Breastfeeding – The natural choice. Retrieved 15/06, 2011
- Australian Bureau of Statistics. (2012). 1367.0 - State and Territory Statistical Indicators, 2011 Retrieved 21/05, 2012
- Australian Government. (2011). NBN Empowering Australia. Retrieved 14/11/2011
- Australian Health Ministers' Conference. (1994). *National Rural Health Strategy*. Canberra: Commonwealth Information Service.
- Australian Health Ministers' Conference. (1996). *National Rural Health Strategy Update*. Canberra: Commonwealth Information Service.
- Australian Health Ministers' Conference. (2011). *National Maternity Services Plan*. Canberra.
- Australian Institute of Health and Welfare. (2008a). *Australia's health 2008*. Canberra: AIHW.
- Australian Institute of Health and Welfare. (2008b). *Safety and quality of health care*. Retrieved 22 October 2010 from <http://www.aihw.gov.au/safequalityhealth/index.cfm>.
- Australian Institute of Health and Welfare (AIHW). (2005). *Rural, regional and remote health-indicators of health*. Canberra: AIHW.
- Bastian, H., Keirse, M., & Lancaster, P. (1998). Perinatal death associated with planned home birth in Australia: population based study. *BMJ*, 317, 384-388.

- Beckett, K. (2005). Choosing Cesarean: Feminism and the politics of childbirth in the United States. *Feminist Theory*, 6(3), 251-275.
- Bell, L. (1998). *Postnatal Depression: Finding the Light at the End of the Tunnel : An Information Pack for Health Professionals*. Canberra: Women's Centre for Health Matters.
- Blank, R. (1984). *Redefining Human Life: Reproductive Technologies and Social Policy*. Boulder, CO: Westview Press.
- Bowling, A. (2002). *Research methods in health. Investigating health and health services* (2nd ed ed.). Buckingham: Open University Press.
- Brown, M. (2002). Health-care choices - the right of all Australians. *Rural and Remote Health*, 2(162).
- Cameron, B., & Cameron, S. (2001). Outcomes in rural obstetrics, Atherton Hospital 1991-2000. *Aust J Rural Health, Suppl 1*, S39-42.
- Carroll, J., Reid, A., Biringer, A., Wilson, L., & Midmer, D. (1994). Psychosocial risk factors during pregnancy: what do family physicians ask about? *Can Fam Physician*, 40, 1280-1289.
- Cloke, P., Philo, C., & Sadler, D. (1991). *Approaching Human Geography: An Introduction to Contemporary Theoretical Debates*. London: Guilford Press.
- Commonwealth of Australia. (2003). *Australian Health Care Agreement between the Commonwealth of Australia and the State of Tasmania 2003-2008*.
- Cope, D. G. (1995). Functions of a breast cancer support group as perceived by the participants: An ethnographic study. *Cancer Nursing*, 18(6), 472-478.
- Corbin, J., & Moore, J. M. (2003). The unstructured interactive interview: Issues of reciprocity and risks when dealing with sensitive topics. *Qualitative Inquiry*, 9(1), 10-13.
- Council of Australian Government. (2009). *NATIONAL HEALTHCARE AGREEMENT*.
- Creswell. (1994). *Research design: qualitative and quantitative approaches*. Thousand Oaks: CA: Sage.
- Creswell, & Plano Clark. (2007). *Designing and conducting mixed methods research*: Sage Publication Inc.
- Creswell, J. (2003a). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* (2 ed.). Thousand Oaks Sage Publications, Inc.
- Creswell, J., & Plano-Clark, V. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage Publications.
- Creswell, J. W. (2003b). *Research design: Qualitative, quantitative and mixed methods approaches*. Thousand Oaks, California: Sage.
- Creswell, J. W. (2003c). *Reserch design: qualitative, quantitative, and mixed method approaches* (2, illustrated, annotated ed.). Thousand Oaks, CA: SAGE.

- Dahlen, H., Jackson, M., & Stevens, J. (2011). Homebirth, freebirth and doulas: Casualty and consequences of a broken maternity system. *Women and Birth*, 24(1), 47-50.
- Department of Health. (2003). *Report to the Department of Health Children's Taskforce from the Maternity and Neonatal Working Group*.
- Department of Health. (2007a). Medicare. Retrieved 12 July 2011, from http://www.health.wa.gov.au/services/detail.cfm?Unit_ID=2467:
- Department of Health. (2007b). *Policy for planned birth at home in South Australia*. Adelaide: Government of South Australia.
- Department of Health and Ageing. (2008). *Improving Maternity Services in Australia: A Discussion Paper from the Australian Government*. Retrieved 25 July 2011 from <http://www.health.gov.au/internet/main/publishing.nsf/Content/maternityservicesreview-discussionpaper>.
- Department of Health and Ageing. (2009). *Improving maternity services in Australia: Report of the Maternity Services Review*: Australian Government Department of Health and Ageing.
- Department of Health and Ageing. (2010). Maternity services reform. Retrieved 12 September 2011, from <http://www.health.gov.au/internet/main/publishing.nsf/Content/pacd-pdb-maternity>
- Department of Health and Human Services. (2007). *Tasmania's Health Plan*: Department of Health and Human Services.
- Department of Health and Human Services. (n.d.-a). Launceston General Hospital Retrieved 25 November 2011 from http://www.dhhs.tas.gov.au/service_information/services_files/launceston_general_hospital
- Department of Health and Human Services. (n.d.-b). North West Regional Hospital Retrieved 30 November 2011 from http://www.dhhs.tas.gov.au/service_information/service_delivery_points/north_west_regional_hospital
- Department of Health and Human Services. (n.d.-c). Royal Hobart Hospital. Retrieved 25 November 2011 from http://www.dhhs.tas.gov.au/service_information/service_delivery_points/royal_hobart_hospital
- Department of Premier and Cabinet. (2008). *Stronger Communities Taskforce, 'The State of Our Community Report 2007'*. Hobart: Department of Premier and Cabinet.
- Department of Rural Health. (2011). Rural Health Teaching Sites. Retrieved 9 December 2011 from <http://www.utas.edu.au/rural-health/rural-health-teaching-sites>

- DeVries, R. (1996). *Making Midwives Legal: Childbirth, Medicine, and the Law*, (2nd ed.). Columbus, OH: Ohio State University Press.
- Dietsch, E., Shackleton, P., Davies, C., Alston, M., & McLeod, M. (2010). 'Mind you, there's no anaesthetist on the road': women's experiences of labouring en route. *Rural and Remote Health* 10(1371).
- Downe, S., McCormick, C., & Beech, B. (2001). Labour interventions associated with normal birth. *British journal of Midwifery*, 9, 602–606.
- Farmer, J., Dawson, P., Martin, E., & Tucker, J. (2007). Rurality, remoteness and the change process: evidence from a study of maternity services in the north of Scotland. *Health Serv Manage Res*, 20(1), 59-68.
- Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating rigour using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods*, 5(1), 80-92.
- Frechtling, J., Sharp, L., & Westat, I. (1997). *User-Friendly Handbook for Mixed Method Evaluations*: Division of Research, Evaluation and Communication.
- Garcia, J., Ness, M., & MacKeith, N. (1996). *Changing Midwifery Care: The scope for evaluation. Report of an NHSE-funded project evaluation of new midwifery practices*. Oxford: National Perinatal Epidemiology Unit.
- Glaser, B. G., & Strauss, A. L. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research*. New York: Aldine Publishing Company.
- Glesne, C., & Peshkin, A. (1992). *Becoming qualitative researchers : an introduction*. White Plains, N.Y: Peshkin, Alan.
- Goodwin, J. (1999). The great Canadian rural obstetrics meltdown. *J Soc Obstet Gynecol Can*, 21(11), 1057-1064.
- Google. (2011). Google Maps - Tasmania Communities. Retrieved 25 November 2011 from <http://maps.google.com.au/maps?hl=en&tab=wl>
- Google. (2012). Google Maps - Australia. Retrieved 11 June 2012 from <http://maps.google.com.au/maps?hl=en&tab=wl>
- Graziano, A. M., & Raulin, M. L. (2000). *Research methods : a process of inquiry*. Boston: Allyn and Bacon.
- Grbich, C. (1999a). *Qualitative Research in Health*. Thousand Oaks, CA: SAGE Publications, Inc.
- Grbich, C. (1999b). *Qualitative research in health: an introduction*: Allen and Unwin Pty Ltd.
- Green, J., Renfrew, M., & Curtis, P. (2000). Continuity of carer: what matters to women? A review of the evidence. *Midwifery*, 16, 186-196.
- Griew, K. (2003). Birth centre midwifery down under. In M. Kirkham (Ed.), *Birth Centres. A Social Model for Maternity Care* (pp. 209–222). London: Elsevier.
- Hansen, E. C. (2006). *Successful qualitative health research: a practical introduction*. Crows Nest, NSW: Allen & Unwin.

- Hatcher, L. (1994). *A step-by-step approach to using the SAS(R) system for factor analysis and structural equation modeling*. Cary, NC: SAS Institute.
- Health Direct Australia. (2010). Pregnancy, Birth and Baby Retrieved 18 October 2011, from <http://www.healthdirect.org.au/health-information-services/pregnancy-birth-and-baby-website/birthing-topics/when-your-baby-is-born>
- Health Recruitment Plus Tasmania. (2010). Health Recruitment PLUS Strategic Plan 2010 – 2013.
- Heller, G., Richardson, D., Schnell, R., Misselwitz, B., Ku" nzel, W., & Schmidt, S. (2002). Are we regionalized enough? Early-neonatal deaths in low-risk births by the size of delivery units in Hesse, Germany 1990–1999. *Int J Epidemiol*, 31, 1061–1068.
- Henderson, J., & Mugford, M. (1997). An economic evaluation of home births. In G. Chamberlain, A. Wraight & P. Crowley (Eds.), *Home Births: The Report of the 1994 Confidential Enquiry by the National Birthday Trust Fund* (pp. 191–211). London, UK: Parthenon.
- Hendrix, M., Van Horck, M., Moreta, D., Nieman, F., Nieuwenhuijze, M., Severens, J., et al. (2009). Why women do not accept randomisation for place of birth: feasibility of a RCT in the Netherlands. *BJOG: An International Journal of Obstetrics & Gynaecology*, 116(4), 537-544.
- Hoang, H. T., Le, Q., & Kilpatrick, S. (2009). Having a baby in the new land: a qualitative exploration of the experiences of Asian migrants in rural Tasmania, Australia. *Rural Remote Health*, 9(1), 1084.
- Högberg, U., Wall, S., & Wiklund, D.-E. (1990). Risk Determinants of Perinatal Mortality in A Swedish County, 1980-1984. *Acta Obstetricia et Gynecologica Scandinavica*, 69(7-8), 575-579.
- Holmes, G., Slifkin, R., Randolph, R., & Poley, S. (2006). The Effect of Rural Hospital Closures on Community Economic Health. *Health Serv Res* 41(2), 467-485.
- Hope, S., Anderson, S., & Sawyer, B. (2000). *The Quality of Services in Rural Scotland*. Edinburgh: The Scottish Executive Central Research Unit.
- Hundley, V., & Ryan, M. (2004). Are women's expectations and preferences for intrapartum care affected by the model-of-care on offer? *BJOG*, 111, 550–560.
- Hunt, L. (1998). Primary health care for women: An evolving speciality. In A. Smith & C. Rogers-Clark (Eds.), *Women's health: a primary health care approach* (pp. 278-291). Sydney: MacLennan & Petty.
- Institute of Medicine. (1989). *The Effects of Medical Professional Liability and the Delivery of Obstetric Care*. Washington, DC: National Academy Press.
- Johnson, B. C., & Christensen, L. (2004). *Educational research: Quantitative, qualitative, and mixed approaches* (2 ed.). Boston, MA: Pearson Education Inc.

- Kateman, H., & Herschderfer, K. (2005). *Multidisciplinary Collaborative Primary Maternity Care Project. Current Practice in Europe and Australia: A descriptive study* International Confederation of Midwives.
- Kearns, R. (1993). Place and health: toward a reformed medical geography. *The Professional Geographer*, 46, 139-147.
- Kearns, R. (1998). Going it alone. In R. Kearns & W. Gesler (Eds.), *Putting Health into Place: Landscape, Identity and Well-being* (pp. 226–247). Syracuse, NY: Syracuse University Press.
- Kearns, R., & Joseph, A. (1993). Space in its place: developing the link in medical geography. *Social Science and Medicine*, 37, 711-717.
- Kearns, R., & Joseph, A. (1997). Restructuring health and rural communities in New Zealand. *Progress in Human Geography*, 21, 18–32.
- Kenny, A., & Duckett, S. (2004). A question of place: medical power in rural Australia. *Social Science & Medicine*, 58(6), 1059-1073.
- Kildea, S., Polack, W., & Barclay, L. (2008). Making Pregnancy Safer in Australia: The importance of maternal death review. *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 48, 130-136.
- Klein, M., Christilaw, J., & Johnston, S. (2002a). Loss of maternity care: the cascade of unforeseen dangers. *CJRM*, 7(2), 120-121.
- Klein, M., Johnston, S., Christilaw, J., & Carty, E. (2002b). Mothers, babies, and communities: Centralizing maternity care exposes mothers and babies to complications and endangers community sustainability. *Canadian Family Physician*, 48(July), 1177-1179.
- Kornelsen, J., & Grzybowski, S. (2005). Safety and community: the maternity care needs of rural parturient women. *J Obstet Gynaecol Can*, 27(6), 554-561.
- Kornelsen, J., Moola, S., & Grzybowski, S. (2009). Does distance matter? Increased induction rates for rural women who have to travel for intrapartum care. *J Obstet Gynaecol Can*, 31(1), 21-27.
- Kornelsen, J., Stoll, K., & Grzybowski, S. (2011). Stress and anxiety associated with lack of access to maternity services for rural parturient women. *Australian Journal of Rural Health*, 19, 9-14.
- Kubasek, N. (1997). Legislative Approaches to Reducing the Hegemony of the Priestly Model of Medicine. 4, 375–442.
- Larimore, W., & Davis, A. (1995). Relation of infant mortality to the availability of maternity care in rural Florida. *J Am Board Fam Pract*, 8(5), 392-399.
- Leeman, L., & Leeman, R. (2002). Do All Hospitals Need Cesarean Delivery Capability? An Outcomes Study of Maternity Care in a Rural Hospital Without On-Site Cesarean Capability. *The Journal of Family Practice*, 51(2).
- Leipins, R. (2000). Making men: the construction and representation of agriculture-based masculinities in Australia and New Zealand. *Rural Sociology*, 65, 605-619.

- Madill, A., Jordan, A., & Shirley, C. (2000). Objectivity and reliability in qualitative analysis: Realist, contextualist and radical constructionist epistemologies. *British Journal of Psychology*, 91(1), 1-17.
- McDermott, R., Cornia, G., & Parsons, R. (1991). The economic impact of hospitals in rural communities. *J Rural Health*, 7(2), 117-133.
- McDermott, R. J., & Sarvela, P. D. (1999). *Health Education Evaluation and Measurement: A Practitioner's Perspective* (2 ed.). New York McGraw Hill.
- Mead, M. (2004). Midwives' perspectives in 11 UK Maternity Units. In S. Downe (Ed.), *Normal Childbirth: Evidence and Debate* (pp. 71–83). London: Churchill Livingstone,.
- Miles, M., & Huberman, A. (1994). *Qualitative data analysis*. Thousand Oaks, CA: Sage.
- Mohan, J. (1998). Explaining geographies of health care: a critique. *Health and Place*, 4, 113–124.
- Morgan, M., Fenwick, N., McKenzie, C., & Wolfe, C. D. (1998). Quality of midwifery led care: assessing the effects of different models of continuity for women's satisfaction. *Quality in Health Care*, 7(2), 77-82.
- Moster, D., Lie, R., & Markestad, T. (1999). Relation between size of delivery unit and neonatal death in low risk deliveries: population based study. *Arch Dis Child Fetal Neonatal Ed*, 80(3), F221–F225.
- NASOG. (2008). *Submission to Maternity Services Review*. CROWS NEST National Association of Specialist Obstetricians and Gynaecologists.
- National Rural Women's Coalition. (2005). Healthy women - Healthy communities. Retrieved 15 June 2010 from <http://www.ruralwomen.org.au>.
- Nesbitt, T., Connell, F., Hart, G., & Rosenblatt, R. (1990). Access to Obstetric Care in Rural Areas: Effect on Birth Outcomes. *Am J Public Health*, 80, 814-818.
- Nesbitt, T., Larson, E., Rosenblatt, R., & Hart, L. (1997a). Access to maternity care in rural Washington: its effect on neonatal outcomes and resource use. *Am J Public Health*, 87(1), 85-90.
- Nesbitt, T., Larson, E., Rosenblatt, R., & Hart, L. (1997b). Access to maternity care in rural Washington: its effects on neonatal outcomes and resource use. *Am J Public Health Manag Pract*, 87(1), 85-90.
- NSW Department of Health. (2003). Maternity Care Options. Retrieved 11 May 2010 from <http://mhcs.health.nsw.gov.au>.
- Nunnally, J. (1978). *Psychometric theory*. New York: McGraw-Hill.
- Oakley, A. (1999). Who cares for women? Science versus love in midwifery today. In E. Teijlingen, G. Lowis, P. McCaffery & M. Porter (Eds.), *Midwifery and the Medicalization of Childbirth: Comparative Perspectives*. New York: Nova Science.
- Parliament of Tasmania. (2012). *Budget Paper No 1: The Budget*. Hobart: Parliament of Tasmania.

- Pitchforth, E., Watson, V., Tucker, J., Ryan, M., Van Teijlingen, E., Farmer, J., et al. (2008). Models of intrapartum care and women's trade-offs in remote and rural Scotland: a mixed-methods study. *BJOG*, 115(5), 560-569.
- Porter, M. (2000). The midwife in contemporary industrialised society. In E. v. Teijlingen, G. Lowis, P. McCaffery & M. Porter (Eds.), *Midwifery and the Medicalisation of Childbirth: Comparative Perspectives* (pp. 145–154). New York: Nova Science Publishers Ltd.
- Postnatal length of stay in Australia. (2009). Retrieved 15/05, 2011
- Poston, B. (2009). An Exercise in Personal Exploration: Maslow's Hierarchy of Needs. *The Surgical Technologist*(Association of Surgical Technologists), 347-353.
- Pred, A. (1983). Structuration and place: on the becoming of sense of place and structure of feeling. *Journal for the Theory of Social Behaviour* 13, 157–186.
- Punch, K. F. (2005). *Introduction to social research: quantitative and qualitative approaches* (2nd ed.). thousand Oaks, California: Sage Publications Inc.
- QRS International Pty Ltd. (2011). *Nvivo 9*. Melbourne QRS International Pty Ltd.
- Rapport, F. (2004). *New Qualitative Methodology in Health and Social Care Research* New York: Routledge: Taylor & Francis Group
- RDAA. (2009). Rural doctors welcome Maternity Services Review Report. Retrieved 23/06, 2011
- Reid, M. (1994). What are consumers' views of maternity care? In G. Chamberlain & N. Patel (Eds.), *The future of the maternity services*. London: 'Royal College of Obstetricians & Gynaecologists' Press.
- Reissman, C. (1983). Women and Medicalization: A New Perspective. *Social Policy*, 14(1), 3-18.
- Rice, P., & Ezzy, D. (1999a). *Qualitative research methods: A health focus*. Melbourne: Oxford University Press.
- Rice, P. L., & Ezzy, D. (1999b). *Qualitative research methods: A Health Focus*. Melbourne: Oxford University Press.
- Roach, S., & Downes, S. (2007). Caring for Australia's most remote communities: obstetric services in the Indian Ocean Territories. *Rural and Remote Health (Online)*, Available from: <http://www.rrh.org.au>, 7(699).
- Robertson, A. (1994). *Empowering Women: Teaching Active Birth in the 1990s*. Sevenoaks: Ace Graphics.
- Rogers-Clark, C. (1998). Women and health. In A. Smith & C. Rogers-Clark (Eds.), *Women's health: a primary health care approach* (pp. 1-18). Sydney: MacLennan & Petty.
- Rosenblatt, R., Reinken, J., & Shoemack, P. (1985). Is obstetric safe in small hospital? *The Lancet*, 326(8452), 429-432.
- Rural Doctors Association of Australia. (2006). *Maternity services for rural Australia*.

- Rural Doctors Association of Australia. (2009). Rural doctors welcome Maternity Services Review Report. *Media Release*
- Ryan-Nicholls, K. (2004). Health and sustainability of rural communities. *Rural and Remote Health* 4(242).
- Salkeld, G., Ryan, M., & Short, L. (2000). The veil of experience: do consumers prefer what they know best? *Health Econ*, 9(267-270).
- Salkind, N. J. (1997). *Exploring research* Upper Saddle River: N.J. : Prentice Hall.
- Savage, W. (1986). *A Savage Enquiry, Who Controls Childbirth?* London: Virago Press.
- Selvanathan, A., Selvanathan, S., Keller, G., & Warrack, B. (2007). *Australian Business Statistics* (4 ed.). Melbourne: Nelson Australia Pty Limited.
- Sim, J., & Wright, C. (2000). *Research in Health Care: Concepts, Designs and Methods*. Cheltenham, Glos. : Stanley Thornes.
- Simkin, P. (1991). Just another day in a woman's life? Women's long-term perceptions of their first birth experience. Part I. *Birth, Dec* 18(4), 203-210.
- Simkin, P. (1992). Just another day in a woman's life? Part II: Nature and consistency of women's long-term memories of their first birth experiences. *Birth, Jun* 19(2), 64-81.
- Simth, K., Humphreys, J., Lenard, Y., Jones, J., Prince, V., & Soo Han, G. (2004). Still the doctor—by a country mile! Preferences for health services in two country towns in north-west New South Wales. *Med J Aust* 181, 91–95.
- Smith, J. (2004). *Australia's rural and remote health: a social justice perspective*. Melbourne: Tertiary Press.
- Smith, M., & Askew, D. A. (2006). Choosing childbirth provider location--rural women's perspective. *Rural Remote Health*, 6(3), 1-9.
- Smyth, R. (2004). Exploring the usefulness of a conceptual framework as a research tool: A researcher's reflections. *Issues In Educational Research*, 14.
- Sontheimer, D., Halverson, L. W., Bell, L., Ellis, M., & Bunting, P. W. (2008). Impact of discontinued obstetrical services in rural Missouri: 1990-2002. *J Rural Health*, 24(1), 96-98.
- Spitzer, M. (1995). Birth centers. Economy, safety and empowerment. *J Nurse Midwifery*, 40, 371–375.
- SPSS 15.0. (2006). *Command Syntax Reference* Chicago: SPSS Inc.
- Stehlik, D. (2001). Out there: places, spaces and border crossings. In S. Lockie & L. Bourke (Eds.), *Rurality bites: the social and environmental transformation of rural Australia* (pp. 30-41). Sydney: Pluto Press.
- Stern, G., & Kruckman, L. (1983). Multi-disciplinary perspectives on post-partum depression: An anthropological critique. *Social Science and Medicine*, 17(15), 1027-1041.

- Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: techniques and procedures for developing grounded theory*. Newbury Park, USA, CA: Sage.
- Sullivan, D., & Weitz, R. (1988). *Labor Pains: Modern Midwives and Home Birth*. New Haven, CT: Yale University Press.
- Sydney West Area Health Service. (2005). Consumer and Community Engagement Framework for Sydney West Area Health Service. Available at http://www.wsahs.nsw.gov.au/ahac/documents/Consumer_Community_Engagement_Framework.pdf.
- Thomas, J., & Harden, A. (2008). Methods for thematic analysis synthesis of qualitative research in systematic reviews. *Journal of Medical Case Reports*, 8(45).
- Tracy, S., Sullivan, E., Dahlen, H., Black, D., Wang, Y., & Tracy, M. (2006). Does size matter? A population-based study of birth in lower volume maternity hospitals for low risk women. *BJOG*, 113(1), 86-96.
- Treichler, P. (1990). Feminism, Medicine, and the Meaning of Childbirth. In M. Jacobus, E. Keller & S. Shuttleworth (Eds.), *Body/Politics: Women and the Discourses of Science* (pp. 129–138). New York Routledge.
- Tucker, J., Hundley, V., Kiger, A., Bryers, H., Caldow, J., Farmer, J., et al. (2005). Sustainable maternity services in remote and rural Scotland? A qualitative survey of staff views on required skills, competencies and training. *Qual Saf Health Care*, 14(1), 34-40.
- Van Wagner, V., Epoo, B., Nastapoka, J., & Harney, E. (2007). Reclaiming Birth, Health, and Community: Midwifery in the Inuit Villages of Nunavik, Canada. *The Journal of Midwifery & Women's Health*, 52(4), 384-391.
- Walker, J., Hall, S., & Thomas, M. (1995). The experience of labour: a perspective from those receiving care in a midwife-led unit. *Midwifery* 11, 120-129.
- Warner-Smith, P., & Brown, P. (2003). *It's time to play a bit: mid-age rural women's leisure and well-being*. Paper presented at the The art and science of healthy community - sharing the country know-how. , 3-4 March 2003, 7th National Rural Health Conference, Hobart, Tas.
- Wearing, B. (1996). *The pain and pleasure of difference*. Melbourne: Longman Australia.
- Welburn, V. (1980). *Postnatal Depression* Great Britain: Fontana Paperbacks.
- Wharton, A. (2005). *The sociology of gender: an introduction to theory and research*. Boston, MA: Blackwell Publishing.
- White, B. (1999). Measuring Patient Satisfaction: How to Do It and Why to Bother. A well-designed survey can help you improve your practice. The key? 'Keep it simple,' and act on what you learn. *Fam Pract Manag*, 6(1), 40-44.
- Wood, V. (2008). *Response to Improving Maternity Services in Australia Paper* ACMTAS.

- World Health Organisation. (n.d.). Health topics – Breastfeeding. Retrieved 23/2, 2011
- Worley, P. (2004). Good health to rural communities? *Rural and Remote Health*, 4(292).
- Zadoroznyi, M. (1999). Social class, social self and social control in childbirth. *Sociology of Health and Illness*, 21, 267–289.

Appendix 1 Ethics approval documentation

- Ethics approval letter

Social Science Ethics Officer
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Marilyn.Knott@utas.edu.au



MEMORANDUM

HUMAN RESEARCH ETHICS COMMITTEE (TASMANIA) NETWORK

FULL COMMITTEE ETHICS APPLICATION APPROVAL

4 February 2010

Dr Quynh Le
Rural Health
Private Bag 1372
Launceston

Dear Dr Le

Ethics Reference: H10967

Project Title:

Maternity care and services in rural Tasmania: The perspectives of rural women and health professionals.

PhD candidate: Mrs Thi Hai Ha

The Tasmania Social Sciences HREC Ethics Committee approved the above project on 25 January 2010.

Please note that this approval is for four years and is conditional upon receipt of an annual Progress Report. Ethics approval for this project will lapse if a Progress Report is not submitted.

The following conditions apply to this approval. Failure to abide by these conditions may result in suspension or discontinuation of approval.

1. It is the responsibility of the Chief Investigator to ensure that all investigators are aware of the terms of approval, to ensure the project is conducted as approved by the Ethics Committee, and to notify the Committee if any investigators are added to, or cease involvement with, the project.
2. Complaints: If any complaints are received or ethical issues arise during the course of the project, investigators should advise the Executive Officer of the Ethics Committee on 03 6226 7479 or human.ethics@utas.edu.au.

3. Incidents or adverse effects: Investigators should notify the Ethics Committee immediately of any serious or unexpected adverse effects on participants or unforeseen events affecting the ethical acceptability of the project.
4. Amendments to Project: Modifications to the project must not proceed until approval is obtained from the Ethics Committee. Please submit an Amendment Form (available on our website) to notify the Ethics Committee of the proposed modifications.
5. Annual Report: Continued approval for this project is dependent on the submission of a Progress Report by the anniversary date of your approval. You will be sent a courtesy reminder closer to this date. **Failure to submit a Progress Report will mean that ethics approval for this project will lapse.**
6. Final Report: A Final Report and a copy of any published material arising from the project, either in full or abstract, must be provided at the end of the project.

Yours sincerely

A handwritten signature in black ink, appearing to read "J. Brug Schmidt". The signature is written in a cursive, flowing style.

Ethics Executive Officer

Social Science Ethics Officer
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Tel: (03) 6226 2764
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MEMORANDUM

HUMAN RESEARCH ETHICS COMMITTEE (TASMANIA) NETWORK

APPROVAL FOR AMENDMENT TO CURRENT PROJECT

03 May 2010

Dr Quynh Le
Rural Health
Private Bag 1372
Launceston

Ethics Reference: H10967

Maternity care and services in rural Tasmania: The perspectives of rural women and health professionals.

Dear Dr Le

The Chair of the Tasmania Social Sciences Human Research Ethics Committee approved the Amendment to the above project on 2/5/2010.

Amendment description: Offering incentives to survey participants with a hope to boost the response rate and rapid response. One more option for women who have had childbirth over 5 years. See Full Amendment Application for details.

Yours sincerely

A handwritten signature in dark ink, which appears to read "J. Bruyn Schmidt".

Ethics Executive Officer

Appendix 2 Publication derived from the thesis

Book chapter

Hoang, H., Le, Q., & McManamey, RM (2011). Social Impacts of Closure of Maternity Services in Rural Areas. In Q.Le (ed), *Health and wellbeing: A social and cultural perspective*, pp. 69-78. New York: NOVA Science Publishers Inc. [Research Book Chapter]

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Appendix 2 Publication derived from the thesis

Book chapter

Hoang, H., Le, Q., & McManamey, RM (2011). Social Impacts of Closure of Maternity Services in Rural Areas. In Q.Le (ed), *Health and wellbeing: A social and cultural perspective*, pp. 69-78. New York: NOVA Science Publishers Inc. [Research Book Chapter]

Appendix 3 Final version of survey questionnaire

Maternity care and services in rural Tasmania: The perspectives of women and health professionals.

The survey should take 10 minutes to complete.

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Please try to return this questionnaire within 7 days

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Please tick (✓) the most appropriate box for each of the following items.

Part A: About you

1. What is your age group?
☐ 18 – 21
☐ 22 – 30
☐ 31 – 40
☐ Over 40
2. Level of education completed
☐ Primary school
☐ Secondary school
☐ University
☐ Other, please specify:
3. Language normally spoken at home
☐ English
☐ Other, please specify:
4. Do you identify yourself as an Aboriginal or Torres Strait Islander (ATSI)?
☐ No
☐ Yes
5. When did you have your most recent baby/babies?
☐ Less than 1 year ago
☐ 1 to 2 years ago
☐ 2 to 5 years ago
☐ Over 5 years
6. How far was your nearest maternity unit at the time of your most recent baby/babies' birth?
☐ Less than an hour's drive
☐ 1 to 2 hours' drive
☐ More than 2 hours' drive **Please turn over**

Part B: Your experiences of maternity services for your most recent baby/babies

7. Did you attend antenatal check-ups during your pregnancy?
☐ Yes, please go to the next question
☐ No, please go to question 14
8. Where did you have your antenatal check-ups? (Tick more than one if applicable)
☐ Major hospital (e.g. Launceston General Hospital, Royal Hobart Hospital)
☐ Local hospital
☐ Local GP
☐ Specialist
☐ Other, please specify:
9. Did you have a choice where to go to attend antenatal check-ups?
☐ Yes
☐ No
10. Did you have a choice regarding whom you would see for antenatal check-ups?
☐ Yes
☐ No
11. Who provided care during your pregnancy?
☐ Midwives
☐ GP
☐ An obstetrician
☐ A combination of midwives and GP/obstetrician
12. During pregnancy you received most care from
☐ The same one or two health professionals
☐ Different health professionals each time
13. Thinking about your antenatal care, how satisfied were you with the care you received?
☐ Satisfied
☐ Somewhat satisfied
☐ Dissatisfied
14. Did you attend antenatal classes?
☐ Yes, please go to the next question
☐ No, please go to question 18
15. Where did you attend antenatal classes?
☐ Major hospital (e.g. Launceston General Hospital, Royal Hobart Hospital)
☐ Local hospital
☐ Local GP
☐ Other, please specify:
16. How well did you think the antenatal classes had prepared you for childbirth?
☐ Well
☐ Reasonably well
☐ Not enough
☐ Not at all

17. How well did you think the antenatal classes had prepared you for looking after your baby/babies?
- ☐ Well
- ☐ Reasonably well
- ☐ Not enough
- ☐ Not at all
18. Did you have a choice where the birth could take place?
- ☐ Yes
- ☐ No
19. Where did you give birth to your last baby?
- ☐ Major hospital (e.g. Launceston General Hospital, Hobart Royal Hospital)
- ☐ Local hospital
- ☐ At home
- ☐ Other, please specify:
20. Type of delivery you had
- ☐ Vaginal delivery
- ☐ Caesarean delivery
- ☐ Induced labour
- ☐ Mixed type of delivery
21. Which health professionals were present during your labour/child birth? (Tick more than one if applicable)
- ☐ Midwife
- ☐ Hospital doctor/obstetrician
- ☐ A group of health professionals (e.g., midwives, doctors, obstetrician, nurses)
- ☐ Other, please specify:
22. Did you breastfeed your baby after he/she was born?
- ☐ Yes, please go to the next question
- ☐ No, please go to question 25
23. How long did you breastfeed your baby for?
- ☐ 1 – 3 months
- ☐ 4 – 6 months
- ☐ 7 – 12 months
- ☐ More than 12 months
24. What kind of support were you given by health professionals to breastfeed the baby (Tick all options that apply)?
- ☐ Help
- ☐ Encouragement
- ☐ Advice
- ☐ Privacy
- ☐ Not enough support
25. How long did you stay in the hospital after the baby was born?
- ☐ Less than a day
- ☐ 1 – 2 days
- ☐ 3 – 5 days
- ☐ 6 days or more
- Please turn over**

26. The length of the hospital stay was
☐ Just right
☐ Too long
☐ Too short
27. Thinking about your labour/child birth, how satisfied were you with the care you received?
☐ Satisfied
☐ Somewhat satisfied
☐ Dissatisfied
28. Did you go for postnatal check-ups?
☐ Yes, please go to the next question
☐ No, please go to question 31
29. Where did you go for postnatal check-ups?
☐ Major hospital (e.g. Launceston General Hospital, Royal Hobart Hospital)
☐ Local hospital
☐ Local GP
☐ Specialist
30. Thinking about your postnatal care, how satisfied were you with the care you received?
☐ Satisfied
☐ Somewhat satisfied
☐ Dissatisfied
31. Did you go for baby check-ups?
☐ Yes, please go to the next question
☐ No, please go to question 33
32. Where did you go for baby check-ups?
☐ Major hospital (e.g. Launceston General Hospital, Royal Hobart Hospital)
☐ Local hospital
☐ Local GP surgery
☐ Child health centre
☐ Home visit

Part C: Your views on maternity services in rural areas

33. How far would you be willing to travel to be confident of safe delivery?
☐ Less than one hour drive
☐ One to two hours drive
☐ More than two hours drive
☐ Not concerned about driving time
☐ Other, please specify:
34. Antenatal check-ups should be provided locally.
☐ Strongly Agree
☐ Agree
☐ Not sure
☐ Disagree
☐ Strongly disagree

35. Antenatal classes should be provided locally.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Not sure
- ☐ Disagree
- ☐ Strongly disagree

36. Postnatal checkups should be provided locally.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Not sure
- ☐ Disagree
- ☐ Strongly disagree

37. How long should a woman stay in hospital after delivery?

- ☐ Discharge as soon as possible
- ☐ Less than 2 days
- ☐ More than 2 days
- ☐ Other, please specify:

38. How important is it to have one main carer who is responsible for your maternity care?

- ☐ Very important
- ☐ Important
- ☐ Not important

39. How important is it to be cared for in labour by a midwife whom you had met during pregnancy?

- ☐ Very important
- ☐ Important
- ☐ Not important

40. How important is it to have a maternity unit in your local hospital?

- ☐ Very important
- ☐ Important
- ☐ Not important

41. If you can choose what model of care, which would you prefer? (Please tick one)

Conventional care:

midwives will be involved, but your overall care is under the direction of hospital doctors; All methods of pain relief available; 2 hours travel to delivery unit.

☐

Midwife-led care:

midwives are your main carers. Doctors are only involved when complications occur; No epidural available; 1 hour travel to delivery unit

☐

Planned home birth:

midwives will be your main carer. You will be transferred to the hospital if complications occur; No epidural available; No travel time

☐

Part D: Your own comments

Is there anything else that you would like to tell us about maternity care in your area?

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Is there anything else that you would like to tell us about maternity services that you would like to have available in the future?

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If you would be available to participate in a 30-45 minutes follow up interview, please let us know:

Your name:.....

Your email:.....Phone:

Thank you for your time.

**It is only with the generous help of people like yourself that such research
can be used to improve health services.**

Appendix 4 Interview guide (women interviews)

Interview guide for women

1. Were you given options where to go and whom you would see for antenatal checkups?
2. If you had to travel to antenatal checkups, were there any difficulties associated with travel for antenatal checkups?
3. Did you attend antenatal classes? If yes where did you attend them? How did you experience it?
4. If you did not attend antenatal education, did you have any reasons or difficulties that you could share with us?
5. Were you given choice where birth could take place?
6. Where did you give birth? Were you informed about a various way of giving birth and pain reliefs?
7. What type of delivery did you have? How was your child birth experience?
8. Were you given options for care after the baby was born? Where did you go for your postnatal checkups and baby checkups?
9. What kind of support did you have from your family and others in your postnatal period?
10. Were there any difficulties that you experienced when you were in the hospital?
11. Were you cared for by one main carer (doctor and/or midwife) from pregnancy to birth?
12. How important is it to have one carer who is responsible for care from pregnancy to birth?
13. How was the coordination of health professionals (between midwives and doctors and other involved health professionals) in your experience?
14. What is your attitude about homebirth? Is it safe to give birth in your own place with the assistance of a midwife?

Appendix 5 Interview guide (health professionals interviews)

Interview guide for Health Professionals

1. Could you please introduce yourself? What is your profession? How long have you been working as a health professional?
2. What do you think about certain risks that women may have in childbirth, particularly in rural and remote areas?
3. What difficulties do you think rural women face when the local hospital does not provide maternity services?
4. What are some expectations that expecting mothers often have towards maternity services? Any difference between those in cities and those in rural areas?
5. Would it be safe for low risk pregnant women to give birth in the small rural maternity unit without caesarean section?
6. What do you think about continuity of care or carer? Is it possible to provide that care for childbearing women in the current system
7. What is your opinion on planned home birth? Should the government support women with low risk to have a planned homebirth with assistance of a midwife?
8. What do you think about collaboration among health professionals in maternity care in Tasmania?
9. What suggestions or comments would you recommend to improve maternity services for rural women in Tasmania?